

Volume XXI. Number 17

October 24, 1906

MUNICIPAL JOURNAL AND ENGINEER



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Municipal Journal and Engineer
Flatiron Building, New York City

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In the respective following issues of the Municipal Journal and Engineer considerable space will be devoted specially to the subjects as indicated:—

—1906—

November 7th - - LIGHTING

—Gas, Electricity, Etc

December 5th - - CONCRETE

MUNICIPAL JOURNAL AND ENGINEER

VOLUME XXI.

NEW YORK, OCTOBER 24, 1906.

No. 17

Published every Wednesday by

THE MUNICIPAL PUBLISHING COMPANY

Flatiron Building, Madison Square,

New York City

Telephone, 6723 Gramercy, New York

Entered as second-class matter, January 3, 1906, at the Post Office at New York, N. Y., under the Act of Congress of March 3, 1879.

TERMS OF SUBSCRIPTION, PAYABLE IN ADVANCE

United States and possessions, Canada, Mexico, Cuba, \$3.00 per year
All other countries 4.00 per year

Make all checks payable to The Municipal Publishing Company.

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Criticism of Public Officials

SECRETARY ROOT, referring to conditions at Panama, states: "The greatest danger in the way of canal construction now seems to me to be lest the really good and able men who are competent to handle it, and who can get profitable employment elsewhere, should be unwilling to continue in the service under indiscriminate misrepresentation and abuse." The same danger exists for the public service of our cities. "Indiscriminate misrepresentation and abuse" too well describes what many city officials are subjected to. We believe that the average public servant is fully as honest and as intent on making a good record for his department as are the servants of private corporations. The wonder is that, having given the dog a bad

name, he does not more often try to live up to his reputation. We do not maintain that public work is always, or even in most cases, as well or as economically done as private; but when not, the reasons are generally to be found in the system, in red tape, and in the very continual changing of officials which such misrepresentation brings about, rather than in the dishonesty, carelessness or inefficiency of the officeholders. To secure the best service a city should carefully select its servants, and, once selected, keep them in office long enough to become familiar with their duties and identify themselves with their work; but, above all, encourage them by praising where possible and criticising solely for the bettering of the service.

Fire Rates and Fire Protection

PROTEST and indignation are being aroused in certain cities by the acts of fire underwriters in raising insurance rates because of deficiencies in fire protection. In reality this putting a definite financial value on fire protection or its absence is both just and an excellent object lesson, which, it is to be hoped, others will learn, as well as the cities affected. In one city, for instance, whose destructible property is estimated at about \$30,000,000 the offer is made of a reduction in rates of ten cents per hundred if two engines and a water tower are purchased; \$30,000 a year is therefore the estimated value in protection of these appliances in this case.

Sewage in New York Harbor

WHEN, after the sinking of the *Maine*, we were informed that the bottom of Havana harbor was covered with several feet of sewage mud, and exclaimed at the unsanitary methods of our Spanish neighbors, we overlooked the fact that our own principal harbors were being treated in the same way. But the Metropolitan Sewerage Commission has discovered that New York harbor is silting up with the same kind of filth, which now covers a considerable part of the harbor to a depth in places of eight to ten feet. While the commissioners will not render a report for some time, we have little hesitation in making the prediction, based upon what they have learned and their individual opinions, that they will strongly urge the prevention of discharging any sewage into the harbor or any of its feeders. In fact, they have recently "advised" (they have as yet no authority to order) the Bronx Valley Sewer Commission to plan for purifying the sewage from their system before emptying it into the Hudson river at Yonkers. Combined with New York's vigorous protest against the discharge of crude Passaic Valley sewage into the harbor, the trend of opinion is unmistakable.

GAS PRICES AND PRESSURES

Reduced Rates Met by Increased Consumption—Companies
Avoid Investment in Larger Mains—Small
Saving to People

By ALTON D. ADAMS

GAS pressures have gone up as rates have been reduced in many cases, while the bills of consumers have remained nearly the same. The reason usually assigned for an increase of gas pressure is that it avoids the necessity of an investment in large mains as the consumption of gas increases, and the higher pressure no doubt has this advantage for the company. Another advantage that is even more important to the company, and a corresponding detriment to consumers, lies in the fact that the higher pressure causes more gas to escape at the burners and through the joints of defective house pipes. This leakage from poor house pipes goes on constantly, and with the excessive pressures that are now common the gas thus lost may amount to a considerable part of the total consumption in some cases. Even with perfect pipes there is a large loss of gas at the burners as the pressure goes up.

Gas meters are supposed to measure and record all of the gas that passes through them, no matter whether this gas is economically used, or wasted, and for the gas recorded the consumer must pay, unless the meter can be shown to be in error.

Tests of gas candle power are in some cases made by State or city authorities, and in others by the gas companies themselves. In either case these tests are cited as showing what the ordinary consumer may expect to get from the gas in the way of illumination, but too frequently they show instead what the consumer cannot get. When gas is properly tested for candle power with a photometer its consumption at the testing burner is limited to about five cubic feet per hour, and to thus limit the consumption the pressure of the gas is reduced by a pressure regulator to hardly more than five-tenths of an inch of water. After the actual candle power yielded by the gas consumed at the testing burner has been found, and also the actual rate of gas consumption, the figures for candle power are corrected to show the candle power that would have been obtained if the gas had been burned at the rate of exactly five cubic feet per hour.

Such tests are very desirable to show what illumination the gas will yield at the proper pressure of about one-half inch of water, but they give only a very uncertain indication of the candle power that the ordinary consumer can get for each five cubic feet of gas consumed per hour, at pressures of two, three or five inches of water. With these last-named pressures, at which gas is supplied in many cities, an ordinary flat-frame burner of good design will allow the escape of ten, fifteen, twenty or more cubic feet of gas per hour, though this same burner when used for testing at a pressure of five-tenths of an inch of water may consume only five feet of gas per hour. By these excessive gas pressures consumers are doubly wronged,

for the great increase in the consumption of gas carries with it a comparatively small increase of total candle power. The consumer is thus obliged to use far more gas than he desires, and this at a greatly reduced amount of light per cubic foot.

General use of gas stoves and mantle burners is often put forth as an excuse for the great increase of gas pressures that is going on, but it is well known that one inch of water pressure in the gas is ample for good results at these devices. Compare this figure for desirable pressure with the four to five inches of water pressure at which gas is delivered to consumers in more than one New England city, and the eight to ten inches of water pressure under which gas reaches the burners of consumers in a great city of the West.

It is said, however, that the consumer may avoid the great waste of gas incident to these excessive pressures by turning the gas cock partly off, either at the meter or at each burner. While it is true that the consumer may save a part of the waste of gas if he is nimble enough to get around to the gas cocks every time the pressure changes, it is not true that any degree of care in this regard will enable a consumer to get as much light per cubic foot of gas at these excessive pressures as the gas will yield at a suitable pressure like that at which candle power is tested. The short reason for this is that gas cannot be economically burned for the production of light when it flows from an ordinary flat-flame burner at high pressure. By turning the key at such a burner the flow of gas is reduced in amount, because the opening through which it comes is reduced in size, but the small stream or jet of gas still moves at high velocity and pressure, if there is a high pressure in the pipe.

At the pressures in scores of cities flat-flame burners consume fully twice their normal volume of gas, and this waste burdens gas consumers with an unnecessary expense of millions and probably tens of millions of dollars annually in the United States. Viewed from an economic standpoint, the excessive pressures at which gas is often distributed result in a great waste of the resources of the public, in the form of coal, oil and labor, but the money value of these resources the gas consumers are forced to pay.

The remedy for this situation lies simply in the reduction of the pressures at which gas is delivered in the pipes of consumers to reasonable figures, and more nearly to the amounts that were common twenty and thirty years ago. Gas companies may lower the pressures in the pipes of consumers either by using larger distributing mains or by connecting each meter with the pipe of the consumer through a gas pressure regulator. If a gas company elects to install and maintain a pressure regulator between the meter and the pipe of each consumer, then any desired pressure may be carried in the distributing mains along the streets. In any event the gas company should be held to deliver gas at no more than a reasonable pressure in the pipes of consumers. Electric energy at 2,000 volts, or water at 500 pounds' pressure per square inch, would be hardly less suitable for use by consumers than is gas under pressures of four or five inches of water

LOUISVILLE PARK SYSTEM

Proposed \$1,000,000 Bond Issue for Extension and Improvement—Property Valuations Increase—Expenditures and Profit in Kentucky's Metropolis

IN a communication addressed to each member of the General Council, President John B. Castleman reviews what has been accomplished within the past fifteen years toward the establishment of the Louisville, Ky., park system and indicates, with figures, what is necessary to complete and perfect the work. In 1891 an appropriation of \$600,000 was reduced by charges against it to the sum of \$517,410, which was the initial sum spent on the organization of the park system. Subsequently the citizens voted a further sum of \$250,000. These amounts are still outstanding and constitute the only bonded debt of the Park Department.

Former City Assessor, D. F. Murphy, repeatedly made the statement that, estimating the increased value of property from the park development, by careful watchfulness from year to year, the amount of increased taxable value resulting from this branch of the city government has not been less than \$20,000,000. Based upon the present annual assessment of \$1.86, the annual income as a result of development through the park system is \$372,000; and going back only for ten years there has been realized a total income of \$3,720,000 from the park service. There has been a total outlay for parks of \$2,070,625.83. In other words, a net profit over all expenditures of more than \$1,600,000 has been realized.

Mr. Castleman urges the necessity for more liberal support of the park system. The sum of \$110,000 (eight cents in the assessment) is needed annually for maintenance. It is said that there is no park system in the world to be compared with that of Louisville, which has cost so little. Besides, a sum of \$1,000,000 is needed for permanent improvements and extensions, through the purchase of properties adjoining present parks on which options have already been obtained. The Commission claims that in view of actual experience it may be safely asserted that the city would get back in six years from increased taxation the proposed one million dollar bond issue. To quote his own words: "You would, upon a 4 per cent. basis, be paying \$40,000 a year interest, and in five years' time you would derive probably as much as \$200,000 a year income, and this income would increase as developments become effective, and, on the basis of a forty-year issue, the city of Louisville would probably make \$10,000,000 by the investment."

Obtaining land for parks is not making parks; in this connection acknowledgment is made to Major Henry Davis for a gift of \$100,000, which was all spent on the eighteen acres of Central Park, the money having been given for that purpose. No parks can possibly be improved for less than \$1,000 per acre, and small areas cost very much more. The total area of Louisville's parks and parkways on September 1, 1906, was: Iroquois Park, 670.61 acres; Cherokee Park, 400.88 acres; and Shawnee Park, 214.27 acres. Also five smaller parks and four parkways.

REPORT ON LOUISVILLE, KY., SEWERAGE

THE Commission on Sewerage of the City of Louisville, Ky., has published a report upon the sewerage of that city, which treats of considerable changes in and extensions to the present plant, as recommended by the consulting engineers. Among these are a southern outfall sewer, which, with its connections, will drain practically all that part of the city south of Oak street and west of Floyd, besides relieving the present western outfall sewer, which will then be ample for many years to come. The improvement of another sewer will permit the draining of the territory east of Floyd street. A third trunk sewer will drain the northwestern part of the city; and these, with about eleven miles of connecting sewers, will serve to drain all of the flooded districts in the central and other parts of Louisville. New systems also are designed for two of the more recently settled parts of the city. The Beargrass interceptor will remove from Beargrass Creek all the sewage now discharging therein, a much needed improvement. These plans are intended to be sufficiently comprehensive to provide for the thorough sewerage and draining of the city for many years, and contemplate the possibility of a future change to the separate system and the purification of the sewage.

AN ENGLISH DUST-LAYING EXPERIMENT

A JOINT committee of the Roads Improvement Association and the Automobile Mutual Protective Association, of England, is about to conduct a dust-laying experiment at Esher, Surrey, on a three-mile stretch of the main road between London and Portsmouth. This stretch will be divided into twelve quarter-mile portions, each of which is to be treated with different materials, among which will be a granite road recently repaired; tar painted on by hand; "Taafalt," laid about half an inch thick; $4\frac{1}{2}$ in. of granite treated with "Taafalt"; limestone "Quarrite"; granite "Quarrite"; slag treated with tar (either "Tar-mac" or the material recently used on a portion of the Thames embankment); Kentish ragstone treated with tar; small granite setts (the German "Kleinpflaster"); and two or three new materials into which Trinidad Lake asphalt enters in various ways. It is proposed to start the experiment this autumn and to continue it for seven years.

Each contractor or patentee will lay and maintain his own pavement, and a careful record of the cost of each will be kept by the secretary of the committee. It is to be hoped that results and data will be given out from time to time. Long before the seven years elapse several of these materials may be found elsewhere to be of little value, when the results of this test, which before might have been valuable in establishing this point, will become useless so far as such material is concerned.

A modern city's experience with undermined streets is not unique. More than three centuries ago Bristol, England, had to face a situation somewhat similar. On his visit to Bristol, Pepys noticed that the only carts allowed in the streets were those that could be drawn by dogs, for Bristol had dug cellars beneath her streets and stored her wealth therein—rum, tobacco and Bristol milk, the sherry that is still mysteriously tapped.—*Exchange*.

MUNICIPAL NEWS

ALABAMA, Mobile.—On October 9th, for the first time since the recent storm, the municipal service of the Mobile Electric Company, which lights the streets of the city, was turned on. Of the nine circuits comprising the municipal service, but two were in operation the first day. Another was admitted to service the following night, and one each night thereafter until the entire system was in operation. The company's lighting plant was badly damaged by the storm, it being necessary to almost entirely rebuild it. Although without lights for nearly two weeks, the city was remarkably free of disorder.

Montgomery.—The annual report of Chief Browder, of the Fire Department, states: The Department has responded to 259 alarms, an increase of 24 over the previous year. Losses on buildings during the year amounted to \$95,995.49; losses on contents, \$69,207.48; total loss, \$165,202.97. The insurance paid on buildings amounted to \$87,076.69; on contents, \$62,419.48; total insurance paid, \$149,496.17. Losses in excess of paid insurance, \$15,706.80. Value of the buildings at risk was \$1,181,526, and the value of contents at risk \$447,052.60, forming a total property valuation of \$1,628,578.62. The amount of insurance carried on buildings was \$861,290, and the amount on contents \$302,302.50, making a total amount of insurance carried \$1,163,592.50. The total expenditure of the Department amounted to \$42,818.06.

ARIZONA, Bisbee.—The citizens will vote on a proposition to give the International Gas and Light Company the privilege of constructing and maintaining a light and power system in the city and its suburbs. If the franchise is granted—so Attorney Bennett states—the plant will be in operation in eighteen months. A peculiarity of the agreement is that the company agrees to pay the cost of the election.

Phoenix.—The City Council has passed an ordinance creating the office of Building Inspector; also an ordinance providing for the regulation of plumbing, the provisions of which are in accordance with the best practice of sanitary engineers.

CALIFORNIA, Los Angeles.—The first thoroughfare in Los Angeles to be improved under the Santa Monica system of oiled road building is Severance street. The street is to be thoroughly oiled and tamped for a depth of six inches, and the surface will be gravelled. The work is to be done by private contract and cost about 30 cents a front foot.

The entrance of Owen river water to the city, according to a project of the Municipal League, will be celebrated by the dedication of one or more fountains. It is believed that an artistic fountain, designed by some sculptor of national fame, may be obtained for a sum of \$40,000. One hundred small drinking fountains could be erected about the city at a cost of \$10,000.

San Francisco.—Determined to unite for the general good and better protection of the city, and to make every citizen of San Francisco realize the necessity for action without loss of time, men representing hundreds of thousands of labor-employing capital met recently in the offices of the California Canneries Company and adopted articles of incorporation for the Potrero Commercial and Manufacturers' Association.

The Merchants' Association has formally requested the Supervisors to take immediate preliminary action looking to obtaining from the people authority to issue bonds for the purpose of constructing an auxiliary

high-pressure salt water system for fire protection in the business district. The association does not ask that the system be installed over the entire area expected to be eventually covered, but only that district north and south of Market street, below Sixth, which formerly did and hereafter will contain the tallest and most densely populated buildings and the greatest property values. Later the system can be extended. For this district there will be required one pumping station at the foot of Telegraph Hill, and another at the foot of Rincon Hill, with the necessary mains. There would also be one fireboat. Besides this, and as a separate proposition, the Supervisors are requested to ask authority to issue bonds to the amount of half a million dollars to construct reservoirs as recommended by Fire Chief Shaughnessy.

COLORADO, Colorado Springs.—The City Council is holding special meetings every second Monday for the sole purpose of revising the city ordinances.

Leadville.—Simultaneously with the securing of the franchise by the Yak Company, calling for the lighting of the city, demands for increased power have come in from every direction. Accordingly, a new engine and generator have been ordered, which will double the power of the plant. It is possible that arrangements may be made to light the streets before the new machinery arrives.

CONNECTICUT, Hartford.—A legislative committee will, in a few months, present a report on its investigations of uniform municipal charters. The results of the investigation have been largely negative on account of the inability of the commission to present to cities a definite proposition for consideration. Cities, for instance, which have been asked if they would accept a uniform charter, not knowing what its provisions would be, have generally replied in the negative. It is hoped, however, that a suitable form of charter may be prepared, which will obviate the necessity of so much special legislation.

Waterbury.—One of the things the Board of Public Works will endeavor to do another year will be to stock Hamilton Park with grey squirrels. Whether it will be feasible will depend largely on what kind of a dog ordinance the Board of Aldermen passes this fall. The members of the board believe that if dogs can be kept within bounds, it would be very easy to keep the little animals in the park.

DELAWARE, Wilmington.—The annual statement of the finances of the city for the year ended June 30, 1906, has been submitted to City Council by Treasurer Charles H. Blaine. The disbursements during the year were: Street and Sewer Department, \$201,773; Board of Park Commissioners, \$32,555; Board of Education, current expenses, \$182,299.31; new schools, \$20,000; Fire Department, \$49,212.40; Police Department, \$93,019.11; Board of Health, \$1,000; Garbage and Crematory, \$20,712.14; and other disbursements brought the total up to \$897,500.49. The total city debt is \$2,336,400.

Under the new system of garbage collection, complaints have decreased from about eight a day to only two or three.

DISTRICT OF COLUMBIA, Washington.—Pending the receipt of a special report on the typhoid epidemic, citizens are advised as a precaution to boil all drinking water. Examination made by the Department of Agriculture has resulted in the finding of typhoid germs in fruit and vegetables exposed for sale in the open market. About 25 per cent. of the cases have been satisfactorily accounted for; of these, 10 to

15 per cent. were attributed to milk from a dairy adjoining a farm where there had been cases of typhoid. The water filters are doing excellent work, showing better results than the best filters of Europe. Since October, 1905, the tests of filtered water have shown from 13 bacteria per c.cm., in September, 1906, to 77 bacteria per c.cm. in November, 1905. The Washington situation presents an anomaly. The health in the alleys and congested sections of the city is actually better than in the least crowded and fine residence sections.

FLORIDA, Jacksonville.—The Board of Health estimates \$9,130 more for expenses during the current year than for the past year. The disinfection of streets, which has been carried on experimentally, will be conducted on a larger scale. The disinfecting solution is put into sprinklers and the solution sprayed on the streets. The result has been extremely satisfactory, and the number of house flies throughout the city has notably decreased.

Pensacola.—A penalty of \$5 for every hour or fraction of an hour that the water pressure is below a certain limit prescribed by city ordinance has been placed in force by Mayor Bliss against the Pensacola Water Company. Mayor Bliss states that the stand-pipe on North Hill has not contained any water for two weeks, or since the storm, and that, while the charter of the company provides that no penalty shall be imposed in case of accident, more than two weeks have elapsed without repairs, and as the city is liable at any moment to need a high pressure, he has notified the company that it is liable for the penalty of \$5 for every hour or fraction of an hour. At one of the fires recently the gauge at the police station showed a pressure of only 46 pounds, which is far below the pressure demanded by the city at all times. The water company claims that the tower tank, which they have placed on East Hill, complies with their contract.

GEORGIA, Athens.—The City Council has advanced the minimum charge for water from 25 cents to 40 cents per thousand gallons. Rates to consumers using 2,000 to 10,000 gallons will be 20 cents; 10,000 to 20,000 gallons, 18 cents; 20,000 to 30,000 gallons, 16 cents; 30,000 to 40,000 gallons, 15 cents; above 40,000 gallons, 12 cents.

Ordinances have recently been passed limiting the speed of automobiles to 6 miles per hour within the fire limits and 12 miles per hour anywhere within city limits. The use of motor cycles has been forbidden unless their exhaust is so muffled as not to frighten horses.

Augusta.—The hitching ordinance, passed last month, is causing unfavorable comment, and a petition is in circulation asking its repeal or modification. Draymen claim that the ordinance practically compels them to hire an extra man to hold the horse while the delivery man takes parcels to the house. The absence of hitching posts from many blocks in the city is also commented on.

IDAHO, Potlatch.—The Potlatch Lumber Company, which has just started to operate the biggest lumber mill in the world, owns the town of Potlatch. It is modeled on the lines of the town of Pullman, Ill. The company has erected neat and substantial houses and will put in waterworks, a sewerage system and electric lights. A clubhouse will be erected for the men, and churches, schools and other public buildings. Potlatch will be a "dry town," the management having decreed that no saloons shall be allowed within the town limits. The bank building and an eight-room

schoolhouse are now nearly complete. The company store building will be 105 by 110 feet.

ILLINOIS, Cairo.—City Engineer Thistlewood has been at work on plans for the new sewer system for the city, and the matter will soon be presented to the Board of Local Improvements. The general sentiment is that sewers should be provided before surface improvements are made.

Chicago.—The Committee of the Charter Convention, in its report, recommends that the City Council be given the right to regulate the charges of all public service corporations, a power which it now possesses with respect to street railway and lighting companies. It is also planned to give the city in the future the right to require such reports from all public service corporations as will enable the people to comprehend the details of their management. A new feature which is introduced is the application of the optional referendum to all ordinances granting franchises running longer than five years. Such ordinances, when passed by the Council, are not to become effective until ninety days after their passage, and if within that time 15 per cent. of the electorate petition for a referendum the ordinance will be approved or rejected by popular vote.

City Statistician Hugo B. Grosser will ask the City Council to appropriate \$50,000, with which to take a municipal census for the purpose of definitely determining just what is the population of Chicago. The official statistician believes an official municipal census will show a population of not less than 2,045,000, whereas the school census of this year places the total at 1,800,000.

Galesburg.—The Public Library will hereafter use electric-light from the city plant. Hitherto a private company has been paid five cents per kilowatt for this service.

Moline.—Years ago Moline was a Mississippi port, but a wall built into the river has made it necessary for steamers to make a detour of several miles to reach the city by a canal. Recently the Government has let a contract to dig a channel across the upper end of Rock Island, which will again make Moline a river port.

Springfield.—The city has taken over the operation of the lighting plant from the Springfield Light, Heat and Power Company.

Watseka.—The Woman's Club, of Watseka, grew out of an informal association of women who founded a library. The conversion of a dumping ground into a park was another of their successful undertakings. Having beaten the men at civic improvements, they are now managing a burying ground also. The Woman's Club Cemetery Association has raised a sum of \$6,000 and will employ a landscape architect to devise plans for the grounds.

INDIANA, Bicknell.—The county Health Officer, Dr. James N. McCorry, attributes the bad sanitary condition of Bicknell to its form of government; the township is not incorporated, hence does not have a health officer or marshal. Weeds in the roadways are not cut, and a stream running through the town is used as a sewer.

Huntington.—As a result of the success of the new well, drilled to a depth of 550 feet, six more wells will be drilled to a depth of 700 feet or more. An abundant supply of water may be obtained by means of an air lift with wells at a depth of 550 feet. It is believed, however, that if the wells are sunk deeper, veins of water will be found which will force water to the surface.

Muncie.—On the occasion of the Muncie Fall Festival, three arches, studded with electric lights, will be erected across the principal thoroughfare.

Vincennes.—A gas ordinance has been passed which specifies a maximum rate of 25 cents for domestic use on natural gas and 85 cents on artificial; ten cents for natural gas to public buildings, churches and hospitals, while the artificial gas rate to the same is 75 cents. No specific rate is made in the franchise for factories, and one clause specifies that the company may at their option discontinue the natural gas and furnish artificial gas.

INDIAN TERRITORY, Sulphur.—The city has voted to issue \$35,000 bonds for waterworks. It is designed to use water from Government springs in the Platte National Park. Two springs which the city has obtained permission to use would supply 5,000 gallons of water daily. Tests will be made to ascertain whether the minerals in solution would injure ordinary iron pipes to a serious extent.

IOWA, Clinton.—A proposition is said to have been made by the I. & I. Interurban Company to a number of the towns along its route between Clinton and Davenport for street illumination. The company could furnish the lights for the various towns from the same source from which it secures the power for the operation of its cars. The plan is said to be looked upon with favor by several of the towns, and they may be enjoying the convenience of well-lighted streets during the coming winter.

KANSAS, Abilene.—In preparing information for the guidance of voters at the recent bond election, Mayor Humphrey received reports from fifty-seven towns in Kansas, of which forty-eight own their waterworks. All declare it a profitable investment, saving from \$1,000 to \$12,000 a year. In the towns with private ownership it costs annually \$20.11 for a six-room house, bath, fifty-foot lawn, horse or cow, average of all towns; under municipal ownership it costs \$17.42. Abilene pays \$23.50.

Topeka.—A unique campaign is being conducted in favor of an anti-hitching ordinance pending before Council. The ordinance provides that no person shall be allowed to hitch horses along the paved portion of Kansas avenue, from Tenth to Grand streets. The Street Commissioner is instructed to remove all hitching posts, rings, etc. Fifteen minutes is the longest time that any vehicle will be allowed to remain in any one place on Kansas avenue. Heavy loads weighing 10,000 pounds or more will not be allowed to traverse Kansas avenue excepting as crossing. The object of the ordinance is to protect the asphalt pavement.

Paola.—For the first time in twenty-one years the city is without natural gas for fuel and light. Trouble between the Paola City Council and W. M. Mills of Osawatomie caused the city's gas to be shut off. Mills purchased the plant of the Merchants' Oil and Gas Company and merged it with his plant, but notified the Council that he would not operate under its franchise, which he also purchased.

KENTUCKY, Winchester.—At the fifth annual State Development Convention, Colonel Crump, explaining the results of some experiments in Bowling Green, stated that a rain-proof, dust-proof road could be made for from \$800 to \$1,000 per mile. He believed such a road would last ten years without repairs. According to this plan, crude asphalt (Kentucky bituminous rock) is pulverized and placed on the road without heating or further preparation. Even the rolling proc-

ess is considered unnecessary, the tamping of the material being left to traffic.

LOUISIANA, Crowley.—According to I. W. Sylvester, of Alexandria, retained by Mayor Taylor as consulting engineer for the proposed sewerage system in Crowley, for an outlay of \$50,000 the city can install a sewerage system which will have sufficient capacity for Crowley when it is twice its present size. The proposed system will embrace 150 blocks and will require twelve miles of sewers.

Franklin.—Mayor John C. Lewis is endeavoring to rid the town of negroes who refuse to work and who frequent disreputable resorts, preying on the better class. The Mayor had before him recently twenty-five men and five women, and not more than four or five could explain how they earn a living. Under the vagrant law the guilty ones were fined \$10 or ten days at hard labor.

New Orleans.—The first connection with the city sewerage plant was made, October 12, by the C. C. Hartwell Company, Ltd., 213 Baronne street. To celebrate the event Mr. Hartwell invited the Mayor and representatives of the Sewerage Board to luncheon. Two years ago Mr. Hartwell piped his building in preparation for the event.

Superintendent Earl of the drainage system reports that on the day of the hurricane, pumping was delayed temporarily because of the power wires breaking down. The service was interrupted for little more than an hour. The overflow from the Old Basin threatened to overwhelm the No. 2 station, but a change of wind caused the water to recede, and the canal was pumped out in a couple of hours.

In the matter of sewerage pumping stations, Mr. Earl says that all the power and telephone cables have been put in, and at Station A all boilers have been under steam. The station was not ready for test yet, but he saw no reason why the plant could not keep the sewers pumped out, and therefore felt warranted in giving permits for connections with the sewers.

MAINE, Portland.—Water and light were the two important subjects before the city government at recent meetings of the legislative bodies. In the upper branch an opinion from the City Solicitor was read, to the effect that the recent merger between two local electric-light companies is illegal. The new contract offered by the company is considered favorable; in fact, the rates are said to be lower than in any other town in New England. In the lower board the joint committee to confer on the question of renewing the water company's franchise was requested to report by November 12.

MARYLAND, Baltimore.—Because of the belief in various departments at the City Hall that a flat increase to \$2 a day in the pay of the city's day laborers, who now get \$1.66 a day, is not justifiable, the Board of Estimates considered the question of providing a sliding scale, with \$1.66 a day as the minimum, the new rate of pay to be increased for efficiency and length of service.

The Board of Estimates was recently asked to make appropriations aggregating nearly \$1,000,000 for additional new improvements. The requests included \$222,000 for new school buildings and \$582,300 for new paving, and were in addition to the \$400,000 which was already asked for new fire engine houses and equipment.

Hagerstown.—At the regular meeting of the Mayor and Council an ordinance was passed requiring all owners of automobiles who wish to run them upon the

streets for the purpose of hauling passengers to take out a license costing \$50 for a five-passenger machine and \$5 for each additional passenger carried. This was done as a protection to the cabmen of the city.

MASSACHUSETTS, Holyoke.—Municipal ownership of public utilities was given a boom in this city when formal announcement was made that the Gas and Electric Lighting Department of the city would, on December 1, next, reduce the price of gas to \$1 per thousand cubic feet. The city of Holyoke has been in control of the gas and lighting facilities for four years, and the reduction now announced makes a gross decrease of 40 cents and a net decrease of 35 cents since the department was established.

Worcester.—Mayor John T. Duggan says it is apparent to him that the Worcester Police Department is in need of more men to patrol certain sections of the city that are now apparently almost wholly without police protection owing to the large territory some of the policemen have to cover.

MICHIGAN, Grand Rapids.—The members of the Grand Rapids Garbage Commission have finally decided to adopt for municipal collection purposes the ordinary tank wagon similar to the ones now in use by the private company. In fact, the present wagons may be purchased from the company for the city's use. This action is a rejection of the patent tank wagon, which costs \$380, as compared with \$225 for the ordinary tank wagon, and is based on a report of Aldermen McNabb and Baldwin, who witnessed a garbage wagon demonstration at the meeting of the League of American Municipalities at Chicago. It is believed that with the proper precautions and care in handling and cleaning, perhaps the present wagons are as good as any.

Menominee.—The people of Menominee are fond of assigning the credit for the present condition of progress, growth and expansion of the city, compared with the period of loss and depression following the dying out of the lumber industry, to the hustling organization of business men called the Commercial Club, which includes about 100 of the most prominent and progressive business men of the community.

MINNESOTA, Duluth.—A threatened epidemic of diphtheria in the Hill district has been averted. The outbreak was due to the manner in which the quarantine regulations were ignored. A few arrests were necessary to make the imported Americans in that district know what they had to do. Rigid quarantine regulations and disinfection have checked the spread of the disease.

Minneapolis.—There is a well-defined movement on foot in the City Council to probe the methods of public service corporations and to ascertain whether they are all living up to the conditions imposed upon them in their franchises. A committee has been appointed to consult with Duluth and St. Paul committees regarding cheaper street car fares. The question of telephone rates is also being looked into. The Great Northern Railroad was recently ordered to vacate land along Cedar lake. The gas company has been induced to reduce the price of gas. The General Electric Company has been persuaded to make concessions in prices of electricity.

MISSISSIPPI, Jackson.—The municipal authorities have discovered that the ordinance requiring every contractor to procure a permit before he may begin the erection of a new building is not being complied with in scores of cases, and warnings have been issued to all such that they will be severely handled if they do not record their building operations. New buildings, both

business and residence, are going up in every direction, so that it is impossible to keep up with the additions that should be made to the assessment rolls unless there is some record.

Meridian.—City Engineer Waldo Meyers reports that during the month of September \$525.06 was saved in constructing 1,958 feet of sewer by employing the convict gang instead of doing the work by contract.

MISSOURI, Carthage.—A protest has been made by Dr. Carter against the action of the City Council in permitting the placing of a battle monument in Carter's Park. The ground for the park was donated by Dr. Carter to the city for park purposes, a condition being that it should revert to the former owners if used for any other purpose.

Kansas City.—The sprinkling of boulevards with oil is a good thing for the motor cars, in the opinion of Dr. W. M. Cross, City Chemist. "It does not injure the rubber tires unless you drive through little pools of oil," he said, "and it is only on poorly kept roads that you would find oil in puddles. The oil hardens the surface and is a great benefit to motorists in settling the dust. Like many other owners of motor cars, I try to obey the law regarding speed. But there are scorches who have no regard for the law or the rights of others. We have to take the dust they throw in our faces. The oil settles the dust. It gives us at least that much protection from the scorcher."

MONTANA, Billings.—The city, by a special election, has decided to issue bonds and build a \$400,000 waterworks system. The present plan of the City Engineer involves the construction of a canal 150 feet wide, which will tap the Yellowstone river three miles west of Billings and conduct the water to and by the power plant which will be immediately south of the city, across the river. Virtually the whole volume of water in the stream will be diverted by this immense canal. A fall of twenty-two feet in the canal will be made at the water plant, and by this means turbines will be turned which will move dynamos generating 5,000 electrical horsepower, 500 of which will be used to pump the water to a reservoir on the hill one mile away, and which will have a capacity of 17,000,000 gallons. This reservoir will be 160 feet above the level of the town, to which the water will be carried by the force of gravity alone.

NEW HAMPSHIRE, Claremont.—Claremont is to have a larger and more powerful pumping station for the waterworks system. A new brick building is to be added to the present one, and in it will be larger pumps, an engine and boiler, the latter to be about 120 horsepower. Edward Buss, of Boston, will draw the necessary plans and specifications.

NEW JERSEY, Bayonne.—It is estimated that the plan for the municipal plant would mean a great saving in lighting charges for the city. Arc lights can be supplied with power for \$40 each per year, where the city now pays more than \$100 a year for each light. The city of Elizabeth pays \$92.50, although the Public Service Corporation recently submitted proposals for a slight reduction in view of the fact that the City Council was considering the establishment of a municipal plant.

West Orange.—The value of the stone crusher purchased last year has been demonstrated. The road account has been run on an appropriation of \$3,000. With this expenditure, 2,200 loads of stone have been distributed throughout the town. If purchased, this material would have cost \$10,000.

NEW MEXICO, Santa Fe.—Probably the oldest and the newest jails in America stand side by side in Santa Fe. When the building now fast going to decay is torn down, one of the landmarks of the city will have been destroyed. How many years the old building has been standing is a matter of conjecture, but it is known that it has been in existence for several centuries, and is supposed to date back to the time of the Spanish conquistadores. The adobe walls are collapsing now, and if allowed to remain it would tumble down within a few more years. The walls and ceilings of the cells are whitewashed, but in spite of this they present an unclean appearance, and when built very little attention was given to ventilation. Standing alongside the old jail is the new building constructed of reinforced concrete and pressed brick. The jail proper, which is built of the reinforced concrete, will be fitted out with steel cells of the most approved pattern. The roof of the jail will be of curved steel sheeting, over which will be a thick layer of concrete. The floor will also be of concrete, making the jail not only unbreakable, but practically fireproof.

NEW YORK, Cohoes.—Mayor Archibold recently received a letter from the United Traction Company, informing the Mayor that the company had decided that on and after November 15 the policemen and firemen, when attired in uniform, would be allowed to ride on the company's cars free of charge.

Lockport.—About \$15,000 a year will have to be raised for the sinking fund in connection with the expenditures for the new Niagara River water supply. The change will probably be made on rates of metered water.

NORTH CAROLINA, Wilmington.—The ordinance recently passed by the Board of Aldermen, requiring all gutters from buildings to be placed under the sidewalks leading to the curb, and which was more recently suspended until October 1, to give property owners an opportunity of securing the necessary labor, is now being enforced. A number of prominent merchants on the wharf were recently haled to the Police Court and were let off upon condition that they have the work done immediately.

NORTH DAKOTA, Fargo.—Fargo, because of its prohibition law, is without saloons. Moorhead, just across the Minnesota line, has liquor-distributing centers in great numbers. Fargoans and others who indulge to an extreme on the other side are wont to stray back to this side in a badly befuddled condition. The Fargo police have the trouble of caring for the "drunks," while Moorhead people enjoy the revenue from the saloons. Because of this it has been suggested that Fargo establish toll gates at the bridges and make all persons going over pay 3 cents or 5 cents. This is planned to apply to occupants of street cars as well as pedestrians and those riding in vehicles.

OHIO, Akron.—The Akron Water Company claims to have spent \$125,000 in improving the water service of the city. Seventy-three wells have been sunk, supplying water of a better quality than the lake supply. A standpipe is also being built to increase the fire pressure. Land adjoining the plant has been purchased to secure cleanliness.

PENNSYLVANIA, Allegheny.—The Phipps Public Playgrounds have been closed on account of the demand of the city officials for taxes. Mr. Phipps will deed the property to the city and discontinue support of the playgrounds.

Erie.—The ordinance recently passed, creating the office of Inspector of Gas Meters and defining his

duties, has been amended so as to give the gas company eight hours instead of twenty in which to remove a defective meter.

RHODE ISLAND, Providence.—The Public Park Association has made several suggestions regarding civic improvements to the Common Council. The improvement of the banks of the Woonasquatucket river by grading and tree planting is recommended. To the proper development of a civic center, the acquisition of some railroad lands near the Public Garden is advised. The acquisition of land and establishment of a public playground at Sky High Hill is also favored.

SOUTH CAROLINA, Georgetown.—Black River water is now in the city reservoir. The filtering basins have been completed and there is an abundance of pure water on hand for domestic purposes. The Black River water is of a light amber color, the result of tannic acid taken from the leaves along its course through the forests.

SOUTH DAKOTA, Watertown.—Because he had received complaints from mothers that boys and girls have been allowed to play their nickels in slot machines and thus cultivate a gambling habit, Mayor Martin has issued a strict order that the slot machines must go. The police have notified proprietors of drug stores, candy stores and tobacco stores where the little machines have been in use that they must be put out of business.

TENNESSEE, Knoxville.—The fight for paving the streets of Knoxville as rapidly as possible under the abutting-property law has been taken up by the Knoxville Board of Trade. After some discussion, in which all who participated favored street paving in accordance with the law, and in which some expressed themselves as being at a loss to understand the way in which the City Council has moved in the matter, a motion prevailed at a recent meeting of the board, authorizing the appointment of a committee of five to appear before the City Council and express the sense of the Board of Trade that paving in the improvement districts should be authorized and pushed to completion as rapidly as possible.

UTAH, Salt Lake City.—After building the Big Cottonwood conduit into Parley's canyon reservoir and letting a contract to Patrick J. Moran for \$15,000 for enlarging it, the Committee on Municipal Laws was informed recently that the city had no title to the land. Charles Crismon, who showed to the committee the title to the land covered by the reservoir site, demanded a settlement either by arbitration or by outright purchase of the land. Mr. Crismon values the land at \$15,000.

VERMONT, Rutland.—Probably Rutland is the first municipality in Vermont to build a modern sewer in the mountains in another township to improve her water system. The Aldermen have appropriated \$600 to cover the expense of the work, which is really the initial step in a long campaign against the pollution of feed streams of the reservoir by barnyard drainage. The drain will be 800 feet long and will carry the surface water from the farm of Michael Rooney, situated directly on the bank of the stream, to a sink hole where it cannot get into the city water.

Sheldon.—The town, after paying his burial expenses and probate court fees and erecting a monument over his grave, bids fair to "inherit" the remainder of the estate left by an unknown burglar who was shot while plying his trade. The money amounts to \$63.20—but isn't it tainted?

SOME CITIES' REPORTS

Interesting Data on a Variety of Municipal Subjects—Annual
Expenditures for Water, Sewerage, Lighting and
Street Improvements—Other Matters

ANNUAL REPORTS OF THE FORT WAYNE, IND., City Government, 1905. This volume of 465 pages contains the first annual message of Mayor William J. Hosey; reports of the Departments of Finance, Public Works, Public Safety, Police, Fire, Public Health and Charities, Parks and Water Works. The report of the Department of Public Works includes reports from the City Engineer and the Superintendent of Streets.

ANNUAL REPORT OF DEPARTMENTS OF THE CITY OF NASHVILLE, TENN., for year ending December 31, 1905. This volume of 184 pages contains, besides the general financial statements, reports of the following departments or officers: Electric Light, Waterworks, Draughtsman, Water Tax Assessor, City Engineer, Police, Detective Bureau, Fire, Scavenger, Hospital, Street Sprinkling, Workhouse, Parks, Library, City Veterinarian, and Health Officers.

ANNUAL REPORT OF THE CITY ENGINEER OF TORONTO, ONT., for 1905. This report is well printed, well indexed and well illustrated. The total operations of the Engineering Department for the year amounted to \$1,889,718.92. The Department started work on plans for a sewage disposal system, having been informed by the Provincial Board of Health that the emptying of sewage into the lake would no longer be permitted. A table of analyses of asphalts and asphalt mixtures, giving results of averages of 221 tests of surface mixture, 52 tests for penetration and 41 tests of sand, indicate that the value of this sort of work is appreciated.

FIFTY-FIFTH ANNUAL REPORT OF THE BUREAU OF WATER, ALBANY, N. Y., being part of the Sixth Annual Report of the Department of Public Works for the year ending September 30, 1905. The annual expenses of the Department were \$314,728.84. Superintendent Wallace Greenalch, in a brief report, deals with finances, reservoirs, consumption of water, filtration plant, improved supply, Pumping Department, distributing system, and he submits reports of the Cashier, Master Mechanic, Assessor, Foreman of Street Department, Chemist and Bacteriologist, and the Foreman of the Filtration Plant. The report of Dr. Tucker on gaseous odor and taste in water supply is appended.

MUNICIPAL REGISTER, CITY OF FITCHBURG, MASS., 1906. This is a neat little pocket volume, with flexible leather cover, containing a large amount of information about the city, such as is often difficult to find in the case of other cities. A four-page index is a complete guide to the information contained. The book describes the city government, giving names and addresses of city officials, gives general statistical information and the rules and orders of the City Council.

NINETEENTH ANNUAL REPORT OF THE OBERLIN, OHIO, WATERWORKS, for the year ended December 31, 1905. It is notable that of the four members of the Board of Trustees, three are college professors and one a military officer. Under the administration of this board, the soda-lime method of softening and purifying the water supply was introduced. A farm at the source of water supply was purchased. The policy of reforesting the water shed was inaugurated. Three treatments of the water in the reservoir with copper sulphate, one part in two millions, were applied during the summer and fall, and an improvement in taste of the water resulted.

PERSONALS

BARRETT, W. E., Chief Engineer of the syndicate that bought up the public utility plants of Davenport, Ia., and Moline and Rock Island, Ill., the tri-cities, is making an inspection of the properties. He says that about fifteen miles of new gas mains will be laid in Davenport and twenty-five in Moline and Rock Island.

BECKER, WALDO, Mayor of Davenport, Ia., has returned from a trip through Canada; much time was spent in the new Saskatchewan province.

CATE, JOHN S., Mayor of Everett, Mass., in 1895 and 1897, and who filled other offices in the city and State governments, died recently, aged 68 years.

COCHRAN, CHARLES C., a graduate of the University of Colorado, has been appointed Assistant Professor of Mechanical Engineering at the University of Kansas.

EMERSON, S. W., has been appointed Concrete Engineer of Cleveland, O., a new office created in the Department of Buildings of that city.

FAGAN, MARK M., Mayor of Jersey City, N. J., has returned after a short vacation spent with relatives of Mrs. Fagan at Bowling Green, Ky.

GILKESON, FRANKLIN, who has been elected Chief Engineer of the Fire Department of Bristol, Pa., for a term of three years, bears the distinction of being the first chief to be elected for a longer period than one year.

HODGINSON, JAMES W., for twenty years Chief of the Orange, N. J., Fire Department, died suddenly on a train in Florida, where he had gone on his way to attend the convention of Fire Chiefs at Dallas, Tex.

MACDONALD, GEORGE F., City Electrician, Superintendent of Fire Alarm and Secretary of the Fire and Light Committee of Ottawa, Canada, who is a member of the Association of Municipal Electricians and the Association of Telegraphers, attended the meeting of the latter organization at Washington, D. C., recently.

MACFARLAND, H. B. F., President of the Board of Commissioners of the District of Columbia, is unable to attend the meeting of the American Civic Association at Milwaukee, Wis., and his paper, "Our National Capital," on the program for the evening of the 25th, when "National Problems" will be the topic, will be read by the Secretary, Mr. Clinton Rogers Woodruff, of Philadelphia, Pa.

MILLER RUDOLPH P. M. Am. Soc. C. E., formerly Chief Engineer, Bureau of Buildings, New York City, has opened an office as Consulting Engineer at 527 Fifth avenue, New York.

PLATT, R. W., prepared plans for a sewage disposal plant for Washington, Pa., and a bond issue of \$100,000 has been authorized for construction purposes by the City Council.

RAYMER, H. W., Mayor of Kelowna, B. C., brought a magnificent exhibit of fruit to the New Westminster exhibition, Canada, as a sample of what can be grown in the California of British Columbia.

RHETT, R. G., Mayor of Charleston, S. C., has returned to the city after an absence of two months on his bridal tour, and has relieved Mayor Pro Tem Lapham of the reins of municipal government.

RHODES, B. Y., has been re-elected Mayor of West Point, Miss., and W. B. Cromwell, Chief of Police; the new Aldermen are S. B. White, M. Katz, J. R. Brinker, David Cottrell and H. L. Quin.

SCHAD, C. F., Chief of the Police Department of Pensacola, Fla., has tendered his resignation, to take effect November 1, in order that he may embark in the saloon business, where he expects to make more than \$100 a month, the salary of the City Marshal.

STOLL, ADAM, has been appointed Superintendent of Waterworks of Sandusky, O., vice Thomas Millott, resigned.

WHALEN, JOHN, has been made Chief Engineer of the Fire Department of Montpelier, Vt., and Edward Gilbert and Ned A. Alexander first and second assistants, respectively.

PETTIBONE, L. A., has been elected City Engineer of Fond du Lac, Wis.

THOMPSON, HENRY, has been elected City Engineer of Bay City, Mich.

TRECHLER, WALLACE, City Engineer of Davenport, Ia., with Aldermen Pratt Brooks, Trenkenschuh, Blocklinger, Dauber and Anderson and City Clerk Schaffer, attended the convention of the Upper Mississippi River Improvement Association, at Minneapolis, Minn., and favored the selection of Rock Island or Moline as the meeting place next year.

VANCE, JOHN L., President of the Ohio Valley Improvement Association, which convened in annual session at Portsmouth, O., October 16, visited several of the upriver towns in the interest of the "On-to-Cairo" movement.

WESTON, WILLIAM, of Kansas City, Mo., a pioneer, who in his life had held many political offices, passed away recently, at the age of 75 years.

Some Unusual Fires

MONROE CITY, IND.—Five buildings burned, October 12. No Fire Department. Bucket brigade of citizens extinguished fire. Damage, \$20,000.

LONDON, KY.—An entire block burned, October 17. The county jail was saved after several prisoners had been liberated. Damage, \$100,000.

LOUISVILLE, KY.—Mayfield Woolen Mills' warehouse, burned, October 6. Fire Chiefs en route to Dallas on a special train viewed the fire. Damage, \$400,000.

GRAND RAPIDS, MICH.—The Grand Rapids Malleable Iron Works, burned, October 14. Damage, \$200,000.

OGDEN, UTAH.—The plant of the Ogden Sewer Pipe and Clay Company, totally burned, October 14. Three thousand five hundred and fifty feet of hose had to be used to get one stream of water to fire. Damage, \$50,000.

THE WEEK'S CONTRACT NEWS

Relating to Municipal and Public Work—Street Improvements—Paving, Road Making, Cleaning and Sprinkling—Sewerage, Water Supply and Public Lighting—Fire Equipment and Supplies—Buildings, Bridges and Street Railways—Sanitation, Garbage and Waste Disposal—Police, Parks and Miscellaneous—Proposals and Awards

BIDS ASKED FOR

STATE	CITY	RECEIVED UNTIL	NATURE OF WORK	ADDRESS INQUIRIES TO
Street Improvements				
Minnesota	St. Paul	October 25, 2 P.M.	Paving alleys with brick or block	R. L. Gorman, Clk. Bd. Pub. Works.
Oregon	Estacada	October 25, 7 P.M.	Grading and macadamizing Broadway	City Engineer.
Indiana	Laporte	October 28	Macadam roads in Michigan township	Henry C. Kruger, Chm. Co. Com'rs.
Indiana	Syracuse	October 29	Constructing cement sidewalks	Geo. W. Bundy, City Clerk.
Washington	Vancouver	October 29, 10 A.M.	Clearing, grading and bridging Road No. 8	A. Burnham, Clk. Co. Com'rs.
Iowa	Des Moines	October 30	Repaving 11,187 yards, two streets, with vitrified brick on concrete foundation	W. W. Wise, Board of Public Works.
Missouri	Kansas City	October 31	Grade and macadamize portions two streets	J. L. Phelps, County Clerk.
New York	Albany	October 31, noon	Improving 25 public highways, 89.423 miles, in ten counties	Henry A. Van Alstyne, State Eng'r.
Michigan	Byron	October 31	Constructing one-mile roadway	M. J. O'Meara, Town Clerk.
Indiana	Evansville	October 31	Paving streets and alleys with brick	W. F. Wunderlick, Clk. Bd. Pub. Wks.
New Jersey	Fort Hancock	November 1, noon	Constructing gravel and macadam roads	Lt. Wm. Paterson, Quartermaster.
New York	New York	November 1, 2 P.M.	Regulate, pave, curb, etc., bridge entrance	James W. Stevenson, Bridge Com'r.
Colorado	Colorado Springs	November 3, noon	Grading and repairing culvert	T. W. Jaycox, Denver, State Eng.
Indiana	Crown Point	November 5, 11 A.M.	Constructing three gravel roads	Samuel A. Love, Chm. Co. Com'rs.
New York	Johnstown	November 5, 7:30 P.M.	Laying 6,733 yds. asphalt block pavement, 3,142 ft. stone curb, 489 ft. stone head-ers, etc.	Frank Bogaskie, City Clerk.
Iowa	Ottumwa	November 5, 8 P.M.	Paving and curbing Fourth Street	Chairman Street Committee.
Indiana	Bedford	November 7	Gravel and macadamize 01,385 ft. roads	Walter G. Owen, County Auditor.
Washington	Chehalis	November 8	Cover 6 miles road, with plank or gravel	J. E. Stearns, County Auditor.
Indiana	Perry	November 12, 11:30 A.M.	Improving highways	County Commissioners, Brazil.
Water Supply				
Ohio	Dayton	October 25	Three centrifugal pumps and accessories	Robert Kline, City Engineer.
Illinois	Chicago	October 25	Construct 400 feet water pipe, tunnel under river	Wm. L. O'Connell, Com'r Pub. Wks.
District of Columbia	Washington	October 27, noon	One 42-in. water gate	Board of Commissioners.
Michigan	Iron River	October 27	Complete system of waterworks	Chas. A. Otto, Village Clerk.
Nebraska	Scribner	October 27	Constructing water system	Hal Christy, Village Clerk.
Ohio	Fredericksburg	October 29	Constructing waterworks system	C. G. Rumbaugh, City Clerk.
New Brunswick	Dalhousie	October 29, 7:30 P.M.	Laying 17,000 ft. 7, 10 and 12-in. conduit pipe	A. J. Labec, Town Clerk.
Illinois	Decatur	October 29, 8 P.M.	Pumping engine, 6,000,000 gallons capacity	Albert Leach, City Clerk.
New Jersey	Atlantic City	October 29, 8:30 P.M.	Furnishing and setting pipe, etc.	J. W. Hackney, City Engineer.
Utah	Whiterocks	October 31, 2 P.M.	Water system at Uinta and Ouray agency	Capt. G. G. Hall, Act. Ind. Agt.
New York	New York	October 31, 2 P.M.	Install two boilers and one economizer at new Gravesend pumping station	John H. O'Brien, Water Com'r.
Ohio	Lancaster	October 31	31,000 ft. of 8-in. pipe	Geo. Cunningham, Clerk.
Illinois	Pekin	November 1	Constructing pump plant, including pumps, engines, boilers, condenser, and appurtenances	Harriman Eng. Co., Peoria.
Indian Territory	South McAlester	November 1	Extending mains	Geo. Wilcox, City Engineer.
Ohio	Cincinnati	November 2	Concrete box culvert, Springfield township	Fred. Dreih, Clk. Co. Com'rs.
Illinois	Chicago	November 3, 11 A.M.	Constructing 14-ft. water tunnel, 12,180 ft. long, including shafts, cribs, etc., Sec. No. 3	Wm. L. O'Connell, Com'r Pub. W'ks.
Louisiana	Opelousas	November 4, 4 P.M.	Boring an artesian well	B. A. Little, Mayor.
New York	Brooklyn	November 7, 2 P.M.	Remodel Ridgewood pumping station	John H. O'Brien, Water Com'r.
Pennsylvania	Philadelphia	November 7, noon	Preliminary filters at Belmont Station	Thos. L. Hicks, Dir. Dept. Pub. W'ks.
New York	Yonkers	November 8	Installing 6,000,000 gallon high-duty pump at tube well pumping station	J. J. Devitt, Pres. Water Com'rs.
District of Columbia	Washington	November 10, noon	Furnishing curb and corporation cocks	H. B. F. Macfarland, Commissioner.
Massachusetts	Holyoke	November 12, 7:30 P.M.	452 tons, 20, 16, and 12-in. C. I. water pipe, and 20,000 lbs. special castings	Jas. L. Tighe, City Engineer.
New Mexico	Fort Wingate	November 15	Construct reservoirs and connections	G. L. Morrison, Quartermaster.
Massachusetts	Brockton	November 21, noon	Pumping engine, 6,000,000 gallons capacity	Charles R. Felton, City Engineer.
Louisiana	Jonesville	January 2	Sinking an artesian well	T. M. Mathews, Mayor.
Sewerage				
Ohio	Chardon	October 25, noon	Laying 750 ft. 10-in and 12-in. sewer	R. S. Parks, Village Clerk.
Minnesota	St. Paul	October 25, 2 P.M.	Constructing sewers in two streets	R. L. Gorman, Clk Bd. Pub. W'ks.
Colorado	Denver	October 25	51,400 ft 8 to 18-in. sewers; cost, \$54,400	J. B. Hunter, Engineer.
Minnesota	Albert Lea	October 25	Constructing sewer in 13-ft. excavation	William Berneck, City Engineer.
Ohio	Beach City	October 26, 7 P.M.	Laying 1,200 ft. 18-in. and 24-in. pipe	A. B. Wingate, Village Clerk.
Iowa	Des Moines	October 30	661 ft. 12-in. vitrified clay pipe sewer	W. W. Wise, Bd. of Pub. Works.
New York	Brooklyn	October 31, 11 A.M.	Construct sewer, 14th Avenue	Bird S. Coler, President.
New York	New York	October 31, 3 P.M.	Constructing sewers and appurtenances	John F. Ahearn, President.
Wyoming	Sheridan	October 31, 8 P.M.	Extension to sewer system	E. W. Long, Town Clerk.
Illinois	Rock Island	October 31	Sewers and drains, District No. 2	Geo. W. McCaskrin, Pres. Bd.
New Jersey	Fort Lee	November 1	Sewer system, to cost \$100,000	Dan'l W. McAvoy, Mayor.
Indian Territory	South McAlester	November 1	Sewer system, to cost \$25,000	J. M. Gannaway, City Clerk.
Alabama	Greenville	November 5, 2 P.M.	Three to four miles pipe sewers, with man-holes, flush tanks, etc.	Arthur Pew, Atlanta, Ga., Engineer.
Ohio	Barberton	November 5	Local sewer in Eighth Street	Geo. Davis, City Clerk.
Georgia	Dawson	November 6	Construct complete sanitary system, 8 miles, 8 to 18-in. sewer	J. B. McCrary, Atlanta, Engineer.
Michigan	Escanaba	November 6	Constructing pipe sewers	D. A. Brotherton, Engineer.
Ohio	Cleveland Heights	November 6	Construct six or more sewers	W. G. Phare, Village Clerk.

Public Buildings

District of Columbia.	Washington.	October 25, noon	Two-story brick bldg. at Reform School.	Wyeth & Cresson, Architects.
New York.	Charlotte.	October 25.	Brick school building at Greece.	John M. Keon, District Clerk.
Ohio.	Houston.	October 26.	Erecting a school.	W. T. Gaines, Clerk Bd. Education
New York.	New York.	October 26, 11 A.M.	Alterations, etc., five school buildings.	C. B. J. Snyder, Superintendent.
New York.	Brooklyn.	October 26, noon.	Alterations, plumbing, heating, wiring, etc.	R. W. Hebbard, Com'r Charities.
Louisiana.	New Orleans.	October 26, 1 P.M.	Frame engine house building.	Chas. R. Kennedy, City Comptroller.
Arkansas.	Little Rock.	October 26.	Erecting City Hall, to cost \$175,000.	Chas. L. Thompson, Architect.
North Dakota.	Omenee.	October 26.	Erecting school in Township 100.	Duncan Stewart, Pres. School Board.
Ohio.	Columbus.	October 26.	Amphitheatre on State Fair Grounds.	T. L. Calvert, Sec'y Bd. Agr.
North Dakota.	University.	October 30.	Library building at State University.	J. W. Wilkerson, Sec'y Bd. Trustees.
California.	San Francisco.	October 30.	Buildings for State Normal School.	Stone & Smith, Architects.
Mississippi.	Pass Christian.	October 30.	Two-story and basement school.	The Mayor.
Quebec.	Waterloo.	October 31.	Constructing academy.	Geo. Moynen, Chm. School Com'rs.
Delaware.	Fort Du Pont.	November 1, 11 A.M.	Frame quarters for bachelor officers.	Capt. Louis F. Garrard, Quarterm's'r
New York.	West Point.	November 1, noon.	Erecting bachelor officers' quarters.	Quartermaster.
New York.	Fort H. G. Wright.	November 1.	Constructing two buildings, a gymnasium and set of officers' quarters.	Quartermaster, via New London, Ct.
Kentucky.	Louisville.	November 4.	One-story, \$25,000 brick and stone library.	R. M. Brown, Sec'y Libr. Trustees.
Louisiana.	Lafayette.	November 5, noon.	Erecting high school buildings.	Andrew J. Bryan, New Orleans, Ar't.
Louisiana.	New Orleans.	November 5, 1 P.M.	Central library building.	F. White, City Comptroller.
North Dakota.	Fort Totten.	November 7, 2 P.M.	Frame office building and barn.	Charles L. Davis, Superintendent.
Kansas.	Fort Leavenworth.	November 8, 11 A.M.	Eight double sets non-com. officers' quarters, two stables, guard bldg., w'kshop, etc.	Capt. Peter Murray, Q. M.
Maine.	Portland.	November 8, 3 P.M.	Quarantine buildings and wharf, House Island.	J. K. Taylor, Washington, D. C.
Indiana.	Bloomington.	November 8.	Erecting County Court House.	Samuel M. Kerr, County Auditor.
Missouri.	Caruthersville.	November 8.	Erecting a City Hall.	H. C. Schult, City Clerk.
New Jersey.	Dover.	November 8.	Constructing two brick and steel store houses, U. S. Powder Depot.	Commanding Officer.
Wisconsin.	Hayward.	November 12.	Steam heating plant in Court House.	R. J. Hennessey, Chm. Com.
Wisconsin.	Superior.	November 12.	Low pressure steam heating apparatus for U. S. Post Office Building.	J. K. Taylor, Washington, D. C.
New Jersey.	Paterson.	November 16.	High school, to cost \$400,000.	Wm. T. Fanning, Architect.
Louisiana.	Shreveport.	December 20.	Erecting \$75,000 City Hall.	C. G. Rives, City Comptroller.

Bridges

Indiana.	Indianapolis.	October 25.	Bridge on Mt. Nebo road.	T. E. Spofford, Commissioner.
Pennsylvania.	Portland.	October 26, 9:30 A.M.	Reinforced concrete arch bridge.	L. A. Francisco, Easton, Co. Eng'r.
Ohio.	Wauseon.	October 26.	Constructing bridge in Franklin superstructure, 100 ft., also 40 ft. bridge.	J. E. Merrill, Co. Auditor.
Kansas.	Ottawa.	October 27, noon.	Erect bridges at Harrison and Franklin.	J. W. Reynard, Clk. Co. Com'rs
Ohio.	Toledo.	October 28, 10 A.M.	Constructing six bridges.	J. W. Kerr, County Commissioner.
California.	San Jose.	October 29, 11 A.M.	Concrete and stone bridge, concrete culvert.	A. L. Hubbard, Bd. Supervisors.
Pennsylvania.	Avella.	October 29.	55-ft. span steel bridge.	Wm. Wylie, Washington, Co. Eng.
Missouri.	Kansas City.	October 31.	80-ft. rubble stone bridge or concrete arch; also 35-ft. plate girder and I-beam steel bridges.	Oscar Koehler, Bridge Com'r.
Ohio.	Mt. Gilead.	November 1.	Steel bridge in Peru township.	W. C. McFarland, County Auditor.
Missouri.	Linneus.	November 2 to 7.	Five bridges in Linn County.	T. L. Michael, Co. Surveyor.
Ohio.	Celina.	November 3, 1 P.M.	60-ft. steel or concrete bridge in Granville.	T. A. Weis, County Auditor.
California.	San Jose.	November 5, 11 A.M.	Re-inforced concrete bridge.	A. I. Hubbard, Board Supervisors.
Mississippi.	Vicksburg.	November 5, noon.	Building bridge over Bear Creek.	J. D. Laughlin, Clk. Supervisors.
Indiana.	Rensselaer.	November 5, noon.	Wooden pile bridge, 160 ft. long, 16 ft. road.	James N. Leatherman, Co. Auditor.
Indiana.	Versailles.	November 5, 1 P.M.	Two-stone or cement arch bridges, 80 and 30-ft. spans of concrete, 16 ft. driveways.	Nicholas Volz, County Auditor.
Ohio.	St. Clairsville.	November 5, 1 P.M.	Nine steel bridges with concrete floors.	A. W. Beatty, County Auditor.
Kansas.	Wichita.	November 5, 5 P.M.	Ten steel, concrete or wooden bridges, 46 to 80 ft. long and 18 ft. wide.	R. N. Dorr, City Clerk.
California.	Santa Barbara.	November 5.	Repairing Surf bridge, District No. 4.	C. A. Hunt, Clk. Bd. Supervisors.
Illinois.	Peoria.	November 6.	Scherzer rolling lift bridge.	E. A. Furry, Clk. Public Works.
Georgia.	Powers Ferry.	November 8, 11 A.M.	Three-span bridge, 465 feet long.	Clerk Road Commissioners, Atlanta
Missouri.	Carrollton.	November 8, 1 P.M.	Five steel and three wood bridges.	W. J. Leatham, Bridge Com'r.
Georgia.	Johnsons Ferry.	November 8, 2 P.M.	Three steel span bridge, 365 feet long.	Clerk Road Com'rs, Atlanta.
Kansas.	Wichita.	November 10, noon.	Two 60-ft. and a 30-ft. steel or arch cement bridges, 380-ft. pile bridge and I-beam, 40-ft. steel approach to bridge.	C. N. Cartwright, County Clerk.
Iowa.	Tipton.	November 14, noon.	Building and repairing bridges for 1907.	W. A. Hamm, County Auditor.
Manitoba.	Winnipeg.	November 20, 2:30 P.M.	Superstructure steel highway bridge.	H. N. Ruttan, City Engineer.

Miscellaneous

Louisiana.	Fort St. Philip.	October 25, noon.	Constructing eleven cypress cisterns.	Capt. B. T. Clayton, New Orleans
New Jersey.	Orange.	October 25.	Construct municipal electric-light plant.	Isaac Shoenthal, Mayor.
Oklahoma.	Chillico.	October 25.	200 h. p. water-tube boiler, 120 h. p. engine, 80 kw. dynamo, with switchboard, volt meters, circuit breakers, etc., 311 bbls. cement, etc.	S. M. McGowan, Supt. Indian School
Ohio.	Lima.	October 25.	Construct flat arch or box culvert.	C. E. Craig, City Engineer.
Nevada.	Stewart.	October 26, 2 P.M.	15 h.p. boiler, pipe and fittings, wind mill, tank, and tower, 12,000 brick, cement, building material, etc.	C. H. Asbury, Supt. Indian School.
Ontario.	Owen Sound.	October 27.	Pile and concrete and revetment wall.	Fred Gelinis, Sec'y Dept. Pub. W'ks.
Nebraska.	Scribner.	October 27.	Construct light and heating plant.	Hal. Christy, Village Clerk.
Ontario.	Owen Sound.	October 27.	Build pile and concrete revetment wall.	J. G. Sing, Ontario, Engineer.
Ohio.	Minerva.	October 29, noon.	Engine and generator for municipal electric-light plant.	L. E. Weber, Sec'y Bd. Pub. Affairs.
New York.	New York.	October 30, 3 P.M.	Work at Fordham Hospital Buildings; surety, \$10,000.	Jno. W. Brannan, Pres. Bd. Trustees.
New Jersey.	Orange.	October 29, 8 P.M.	Complete municipal electric light plant, including engines, generators, switchboard, lamps, pole lines, etc.	James M. Seymour, Jr., New'k, Eng.
California.	Mare Island.	October 30, 10 A.M.	Naval supplies, incl. electric crane.	Navy Pay Office.
New York.	New York.	October 30.	Electric passenger elevator; also approaches to freight elevator U. S. Post Office.	J. K. Taylor, Washington, D. C.
New York.	Utica.	October 30.	2,000 ft. 2 1/2-in. cotton, rubber-lined hose.	R. A. Henry, Clerk Fire Com.
District of Columbia.	Washington.	November 1, 10:30 A.M.	Tubular boilers, smoke boxes, steel stacks, feed pumps, check valves, pipe bends, steel rope, etc.	D. W. Ross, Isthmian Canal Com.
New York.	Canastota.	November 1.	Lighting streets and public squares for two or five years, beginning February 6, 1907.	E. B. Roberts, Village Clerk.
Ohio.	Cincinnati.	November 2, noon.	Installing electric lighting, wiring, telephone system, etc., at pumping stations.	Elmer G. Prior, Clk., W. W. Com'rs.
California.	Alcatraz Island.	November 3, 11 A.M.	Erect wharf with iron standard piles.	Jno. L. Clem, A. Q. M. G., U. S. A., Presidio, San Francisco.
Virginia.	Norfolk.	November 3.	Pumping machinery and accessories for dry dock.	Mordecai T. Endicott, Navy Dept., Washington, D. C.
District of Columbia.	Washington.	November 6, 10 A.M.	Naval supplies, including steam pumps, pipe, crane, hose, hardware, etc., for various y'ds.	H. T. B. Harris, P.M.G., U. S. Navy.
Ontario.	Toronto.	November 6, noon.	Lansdowne Avenue subway substructure.	E. Coatsworth, Chm. Bd. Control.
Florida.	Fort Dade.	November 6, 8 P.M.	Repairs to wharf and storehouse.	Lt. M. H. Barry, Quartermaster.
New York.	Albany.	November 8.	Enlarging Erie and Champlain canals, excavating, bridge work, etc.; three contracts; total cost, \$3,938,621.	N. V. Franchot, Supt. Pub. Works.
California.	San Francisco.	November 13.	Three electric traveling cranes for Mare Island Navy Yard, Sch. 201.	H. T. B. Harris, P. M. Gen., U. S. Navy, Washington, D. C.

The Municipal Journal and Engineer wishes to obtain, at the earliest possible moment, advance and reliable information respecting all work projected. Any items sent us will be greatly appreciated. On request, copies containing such information will be mailed to you.

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STREET IMPROVEMENTS

Montgomery, Ala.—Council has passed ordinances for laying 44 pavements and sidewalks.—W. M. Teague, Mayor.

San Francisco, Cal.—Plans have been prepared for widening Dupont street, including widening roadway through block between Pine and California streets; estimated cost, \$1,150,000; bond issue is being urged for purpose.—Thomas P. Woodward, City Engineer.

Tampa, Fla.—R. L. Davis has been awarded contract for paving East Lafayette street and Maryland avenue with vitrified brick, at \$1.45 per square yard for paving and 39 cents per lineal foot for curb; H. H. Scarlett will do the grading for 33½ cents per cubic yard.

Alton, Ill.—Contracts will be let in the spring for paving and sewerage 40 streets.—Edward Beall, Mayor.

Jeffersonville, Ind.—About five miles of paving will be constructed.—Orland Hobbs, President, Board of Public Works.

Steubenville, O.—Council has passed ordinance to pave Lincoln avenue with hard-burned brick, lay curbing, etc.—W. M. Trainer, City Clerk.

West Union, O.—James Noxon has the contract for macadamizing a section of South street for \$3 per rod.

Youngstown, O.—Bids will be received, November 5, for \$58,000 West Federal street paving bonds and other paving, sidewalk and sewer bonds.—Wm. I. Davies, City Auditor.

Youngstown, O.—Bids will be received, November 12, 2 p. m., for \$18,150 North avenue, \$13,155 Elm street paving bonds, and other paving and sewer bonds.—William I. Davies, City Auditor.

Aberdeen, S. D.—Bids are invited for paving ten streets.

Denison, Tex.—Plans are being prepared for 20,000 yards of brick paving on Main street.—R. I. Parks, Engineer.

Marshall, Tex.—Arrangements are being made to expend \$100,000 in street improvements.

SEWERS

Marietta, Ga.—The citizens will vote, October 27, on issue of \$130,000, 5 per cent., sewerage bonds.—E. P. Dobbs, Mayor.

Milledgeville, Ga.—Howard Neely, Marietta, has contract to construct sewerage system for \$18,194.

Pekin, Ill.—Council is considering construction of a \$5,000 brick and stone sewer.

Mooreville, Ind.—Surveys are being made for a complete sewer system; bids will shortly be asked.

Portland, Ind.—Riggs & Sherman, Toledo, O., have been engaged to prepare plans for a complete sewer system.

Nowata, I. T.—Plans are being prepared for waterworks and a sewerage system by Burns & McDonnell, Kansas City, Mo.

Davenport, Ia.—The Moline Heating and Construction Company has been awarded contract for laying 3,500 feet of 8-inch sewers and 1,150 feet of 6-inch water mains in the Healy addition, at \$3,480; the King-Lambert Construction Company, of Des Moines, and the Plainbeck Company, Moline, Ill., also submitted bids.

Taunton, Mass.—The Board of Sewer Commissioners will be urged to begin work on the Bay street sewer at once.—Mayor Tracy.

Greenville, N. C.—Plans and specifications are being prepared for sewers; \$15,000 will be expended.—J. A. Dunley, Superintendent.

Grand Forks, N. D.—J. M. Carroll has been awarded contract for 18-inch vitrified pipe sewer; price per lineal foot complete in place, \$2.50; 15-inch vitrified pipe sewer, complete in place, \$2.35; 12-inch vitrified pipe, complete in place, \$2; 8-inch vitrified catch-basin, 80 cents per foot; manholes, \$60 each; catch basins, \$55 each; concrete, \$5 per cubic yard; labor, \$2 to \$3 per day.—Wm. V. O'Connor, City Auditor.

Alliance, O.—Bonds, \$6,000, will be sold for a sewage-disposal plant.—C. O. Silver, City Clerk.

Alliance, O.—John C. Devine has been awarded contract to lay Broadway sewers, 48-inch, at \$5,650, and 36-inch at \$5,654; the McGinty Construction Company has the contract for concreting the south approach of the Webb avenue viaduct, for \$1,090.

Barberton, O.—Bids will be received, November 5, for \$1,900 bonds for constructing a local storm sewer in Eighth street.—George Davis, City Clerk.

Cincinnati, O.—A \$30,000 sewer will be built from Forest avenue, in Bond Hill; bids are invited.—Board of Public Service.

Dayton, O.—Bids are invited for removing and rebuilding the sanitary pumping station, work to include furnishings and installing pump, motor and all apparatus; cost, \$20,000.—R. E. Kline, City Engineer.

Follansbee, O.—Bids are invited for \$25,000 bonds for constructing sewers.

Fremont, O.—Bonds, \$1,200, will be sold for sewer purposes.—C. F. Bell, City Clerk.

Girard, O.—Bids will be received, November 1, for \$30,000, 5 per cent., sewer bonds.—E. L. Hauser, City Clerk.

Lebanon, O.—Council is considering the construction of a 10-inch vitrified tile sewer in Mound street.—M. E. Gustin, City Clerk.

St. Mary's, O.—Bids for constructing complete sanitary sewerage of fifteen miles have been rejected; plans are to be readvertised and new bids invited, January 30, 1907; estimated cost, \$100,000.

WATER SUPPLY

Lake Village, Ark.—The city will construct waterworks and an electric-light plant in the near future.

Walkerton, Ind.—The waterworks and electric-light plant burned; it will be rebuilt.

Jacksonville, Fla.—The F. M. Prescott Steam Pump Company, Milwaukee, Wis., was awarded contract for triple-expansion pump, 8,000,000-gallons capacity, 170-foot head pressure, with guaranteed duty per 1,000 pounds dry steam, 105,000,000, at \$14,190; bids for cross-compound pumps, 130,000,000 duty, were opened at the same time, as follows: F. M. Prescott Steam Pump Company, \$24,140; Laidlaw-Dunn-Gordon Company, Cincinnati, O., \$26,000; Allis-Chalmers Company, Milwaukee, Wis., \$25,000; Lovety & Son, New York, \$24,550; Snow Steam Pump Company, Buffalo, N. Y., \$24,000.—R. N. Ellis, Superintendent.

Fairbury, Ill.—Bonds, \$6,000, have been authorized to purchase pumping machinery.—G. W. Bennett, City Clerk.

Waukegan, Ill.—Bids were received October 1 for furnishing and laying water pipe. The lowest bid was as follows: 6-inch cast-iron pipe, \$1.02 per foot; 4-inch pipe, 75 cents per foot; 6-inch gate valves, \$16 each; adjustable valve boxes, \$3.75 each; fire hydrants, with auxiliary valves, Ludlow, Eddy & Kesselsaefer, \$48 each; Matthews, \$50 each. The average depth of pipe is 6 feet, except that 580 feet was 6.8 feet and 1,570 feet was 7.2 feet deep; but the price bid was the same for all depths.

Culver City, Ind.—The Culver City Waterworks Company has been organized to construct a waterworks plant.—Address Dr. O. A. Rea.

Cedar Rapids, Ia.—The Water Commissioners propose to establish the meter system.

Abilene, Kan.—The proposition to issue \$90,000, 4½ per cent., waterworks bonds, carried.

Concordia, Kan.—Council has decided to extend the waterworks system.

Hagerstown, Md.—The Whitmer Construction Company, Philadelphia, Pa., has been awarded contract to construct 10,000,000-gallon reservoir on Evers Hill for the Washington County Water Company; cost, \$300,000.

LIGHTING AND ELECTRICITY

Fort Smith, Ark.—The St. Louis and San Francisco Railway is preparing to build an electric-light plant to supply depot and yards.—J. F. Hinckley, St. Louis, Mo., Chief Engineer.

Grass Valley, Cal.—The city has decided to build an \$80,000 municipal lighting plant.

Santa Barbara, Cal.—Bonds, \$75,000, will be issued by the Merchants' Mutual Light and Power Company for improvements.

Cullom, Ill.—It is proposed to organize a stock company to purchase the Ortman electric-light plant or establish a new plant.

Carthage, Ind.—Bids are invited for equip-

ment and improvements for the light, heat and power plant.—Address John W. Beck.

Columbus, Ind.—The Columbus Street Railway Company is preparing to erect a new power house.

Marble Rock, Ia.—A franchise to establish an electric-light plant has been granted Fred W. Smith.

Manhattan, Kan.—An electric-light plant is to be constructed at the State Home for Orphans and the Aged.

Cincinnati, O.—The Miami Heat, Light and Power Company has purchased the plant of the Hartman Mills, and will erect a plant on the site; a dam will be constructed across the Miami.

FIRE EQUIPMENT AND SUPPLIES

Oakland, Cal.—The Board of Police and Fire Commissioners want \$12,000 for hose and \$1,500 for an automobile for Chief Ball.

Bridgeport, Conn.—Council is considering petition to establish new fire engine and hose companies in Newfield avenue and Lafayette street; also for creation of office of Superintendent of Machinery, to keep ten engines of city in repair.—Board of Fire Commissioners.

Edwardsville, Ill.—Bonds have been authorized to purchase additional fire apparatus.

Jeffersonville, Ind.—The Board of Public Works has voted to purchase a first-class fire engine.

Richmond, Ind.—The Fire Department is to be reorganized and improvements made.—Edgar E. Miller, Chief.

Dubuque, Ia.—A new fire engine is to be purchased.

Louisville, Ky.—Plans have been completed for an engine house, 316x200 feet, to cost \$30,000.—Thomas & Bohne, Kellar Building, Architects.

Brandon, Minn.—A new electric alarm is to be installed by the Fire Department, and an aerial truck and additional apparatus purchased.

Sykeston, N. D.—The matter of fire protection is under consideration.

Newark, O.—Bonds, \$2,000, will be sold for a Fire Department building.—L. B. Munch, City Clerk.

Urbana, O.—Council is considering the purchase of additional hose for the Fire Department.

Freemansburg, Pa.—The Town Council has voted to purchase a chemical engine and hose.

Meyersdale, Pa.—The Keystone Fire Company will purchase additional equipment.

PUBLIC BUILDINGS

Girard, Ala.—Bonds, \$10,000, have been voted to erect a new high school building.

Tucson, Ariz.—Bonds, \$50,000, have been voted for a high school.

Little Rock, Ark.—Council has appropriated \$25,000 for the erection of a city hospital.—Address Board of Public Affairs.

Salinas City, Cal.—Bids will be received, November 12, for \$50,000 City Hall and \$15,000 school bonds.—J. J. Kelly, City Clerk.

Moline, Ill.—Peter Peterson has been awarded contract for the new school house at East Moline, at \$9,000.

Minneapolis, Minn.—Council has directed the City Clerk to advertise for proposals for building the new East Side police station.

Macon, Miss.—Bids will be received, November 6, for \$20,000, 4 per cent., Court House bonds.—Z. T. Derrock, Clerk.

STREET RAILWAYS

Los Angeles, Cal.—The Pasadena, Verdugo and San Francisco Electric Railway Company has petitioned for a 50-year franchise to run a line through Griffin Park.

Webster City, Ia.—The Des Moines Interurban Company contemplates extending the line from Woodard to Webster City.—Address H. H. Polk.

Tampa, Fla.—The Tampa and Sulphur Springs Traction Company, whose line is under way, has awarded contract for erecting car barn and office building to E. C. Blake, at \$8,000. McGucken Brothers have the contract for the brick work.

Paducah, Ky.—A street franchise will be sold at auction by the city, October 26, in accordance with an ordinance recently passed.—D. A. Yeiser, Mayor.

Reno, Nev.—The Nevada Interurban Company is arranging to extend its lines to Moab Springs and Lake Tahoe; the line will also be extended to Nashoe Valley next fall.

Roscoe, Tex.—The Roscoe, Snyder and Pacific Railway Company proposes to build a line about 100 miles long.—Address J. F. James, W. E. Wills and Eugene Wood.

Salt Lake, Utah.—A franchise to operate an urban and suburban railway has been granted H. P. Clark.

North Yakima, Wash.—The Yakima Inter-Valley Traction Company has been granted a franchise to operate an electric road on the city streets.

BALTIMORE'S SEWERAGE SYSTEM

Important Contracts Awarded for Preliminary Work—Involve Large Expenditures—Experimental Filter Plant—Lowest Bids for Sewers—A Laboratory

A NUMBER of large contracts for sewer construction have been awarded this year; about \$217,000 worth at Oklahoma City, O. T., in March; \$472,000 worth at Fort Smith, Ark., in July; and the beginning of the largest of any contracts now contemplated, the Baltimore, Md., system, which has been marked by the awarding of contracts for an experimental filter plant, to cost \$6,930.47; a laboratory and building, for \$3,750, and a small system of sanitary sewers at Walbrook for \$33,230.98; the whole forming an experimental plant, constructed at this time for the reason stated in the October 3 issue of the MUNICIPAL JOURNAL. In addition, a contract has been let for about three miles of storm-water drains.

The 45x66 rectangular drain was designed of reinforced concrete only; but on the smaller sizes bids were asked for brick, ordinary concrete, reinforced concrete built in place, reinforced concrete pipe and vitrified pipe, the sizes being 48, 42, 36 and 30 inches diameter. There were five bidders, the highest bid being just about double the lowest.

The prices on different items varied, and in instances the bids of the higher bidders were lower than those of the lower, but as a general proposition, the increases were uniform. The work will be started at as early a date as possible, and, under the direction of Calvin W. Hendrick, the Chief Engineer of the Sewerage Commission, it is to be pushed to a successful conclusion without delay. In preparing for the mammoth undertaking, Mayor E. Clay Timanus, the President of the Board of Awards, and the City Council, have had the advisory counsel of Consulting Engineers, who made a profound study of their subject before submitting recommendations, which have proved of much assistance to Mr. Hendrick.

There has been a great awakening in Baltimore, since the conflagration of a year and a half ago, and municipal officials, as well as the citizens, have shown themselves eager to place the Monumental city in the first rank in the matter of civic affairs.

The following table shows for each size of sewer the relative prices bid for each class of construction:

SIZE	Low-est	Next-high-er	Next-high-er	High-est	
48-inch..	D, 4 B, 1	C, 3 A, 2	B, 3 A, 2	C, 2 A, 1 B, 1 D, 1	A. Brick. B. Ordinary concrete. C. Reinforced concrete. D. Reinforced concrete pipe. E. Vitrified pipe.
42-inch..	D, 4 B, 1	A, 3 B, 2	B, 2 A, 2 D, 1	A, 2 B, 2 D, 1	
36-inch..	D, 4 B, 1	B, 3½ A, 1½	A, 3½ B, ½ D, 1	A, 3½ B, ½ D, 1	
30-inch..	D, 3 B, 1 E, 1	E, 3 B, 1 D, 1	B, 3 D, 1 E, 1	B, 3 D, 1 E, 1	

Illustration and Detail of Bid

To illustrate:—For 48-inch sewer, four bidders bid lowest on reinforced concrete pipe, and one on ordinary concrete; the same being true of 42 and 36-inch also; while for 30-inch one bid lowest on vitrified pipe. The bid in detail of the lowest bidder, M. A. Talbott & Co., of Logansport, Ind., who has been awarded the contract, is given in full, as follows:

Lowest Bid for Building Sanitary Sewers in Walbrook, Md.

BIDS OPENED OCT. 3, 1906; CONTRACT AWARDED OCT. 10.

QUANTITY	M. A. Talbott & Co., Logansport, Ind.	
	Price	Amount
1,350 lin. ft. 8-in. Vit. Pipe, 4 to 8 ft. depth.....	\$0.45	\$611.55
2,415 lin. ft. 8-in. Vit. Pipe, 8 to 12 ft. depth.....	0.68	1,642.20
10 lin. ft. 10-in. Vit. Pipe, 2 to 4 ft. depth.....	0.52	5.20
86 lin. ft. 10-in. Vit. Pipe, 4 to 8 ft. depth.....	0.85	73.10
46 lin. ft. 10-in. Vit. Pipe, 8 to 12 ft. depth.....	1.00	46.00
30 lin. ft. 18-in. Vit. Pipe, 2 to 4 ft. depth.....	0.92	27.60
165 lin. ft. 18-in. Vit. Pipe, 4 to 8 ft. depth.....	1.08	178.20
4,665 cu. yds. rock excavation.....	4.00	18,660.00
4,165 cu. yds. earth excavation above rock.....	.60	2,499.00
4,318 lin. ft. 8-in. Vit. Pipe, in rock, emb. or tunnel.....	.30	1,295.40
373 lin. ft. 10-in. Vit. Pipe, in rock, emb. or tunnel.....	.37	138.01
750 Y-branches { 500..... 100..... 150.....	.40 .30 1.00	340.00
2,064 lin. ft. 6-in. Vit. Pipe, house connections.....	0.50	1,032.00
50 manholes.....	50.00	2,500.00
8 flushing-manholes.....	90.00	720.00
100 lin. ft. 4-in. underdrains.....	.20	20.00
10 cu. yds. concrete.....	10.00	100.00
3,424 cu. yds. embankment.....	.50	1,712.00
250 ft. B. M., lumber left in trench.....	40.00	10.00
2,251 lin. ft. 18-in. Vit. Pipe, in rock, emb. or tunnel.....	.72	1,620.72
Total Amount of Bid.....		\$33,230.98
Number of working days required for completion.....		150

Lowest Bid for Building a Laboratory

BIDS OPENED OCT. 3, 1906; AWARDED OCT. 10, 1906, TO WM. KIRKPATRICK.

BIDDER AND ADDRESS	Amount of Bid	No. of Working days Required for Completion
Wm. Kirkpatrick, Baltimore, Md.....	\$3,750.00	00

Lowest Bid for Constructing Testing Plant

BIDS OPENED OCT. 3, 1906; CONTRACT AWARDED OCT. 10.

QUANTITY	Malcolm W. Hill Co., 405 Cortland St., Baltimore, Md.	
	Rate	Price
825 cu. yds. of Earth Excavation.....	\$1.51	\$1,245.75
50 cu. yds. of Rock Excavation.....	6.00	300.00
165 cu. yds. of Concrete Masonry, Class "A," 1:2½:5.....	8.90	1,468.50
10 cu. yds. of Concrete Masonry, Class "B," 1:3:7.....	7.90	79.00
1,368 lbs. of Steel Reinforcement.....	.04	54.72
500 lin. ft. of 4-in. Vit. Sewer Pipe.....	.12	60.00
125 lin. ft. of 6-in. Vit. Sewer Pipe.....	.15	18.75
3 6-in. Cast-iron Seat Valves.....	55.25	165.75
12 4-in. Cast-iron Seat Valves.....	15.50	186.00
1,200 lin. ft. of 6-in. Lateral Collectors.....	.15	180.00
1 Adjustable Weir.....	25.00	25.00
710 cu. yds. of Broken Stone Filtering Material.....	2.43	1,725.30
130 cu. yds. of Rubble.....	2.10	273.00
5 cu. yds. of Brick Masonry.....	12.90	64.50
200 ft., B. M. of Lumber left in place.....	55.00	11.00
150 lin. ft. of 4-in. W. I. Pipe, with Fittings.....	.49	73.50
Special Machinery, including Sprinkling-Arm, Track, etc..	895.00	895.00
Sewage Screens.....	30.00	30.00
2 Automatic Drip Gate-Valves, with Wheels.....	29.00	58.00
1½-in Stopcock.....	5.00	5.00
Total Amount of Bid.....		\$6,930.47
Number of working days required to complete the contract.....		120

ANALYSIS OF LOWEST BID FOR STORM WATER DRAINS

RECEIVED AT BALTIMORE, MD., SEPTEMBER 10, 1906

Note.—Prices include repaving of streets (cobble, block asphalt, sheet asphalt, granite block). All concrete is 1:2½:5.
Time required for completion of contract, 250 days.

QUANTITY	NATURE OF WORK	BID	AMOUNT	QUANTITY	NATURE OF WORK	BID	AMOUNT
1,450 lin. ft.	Earth excavation and refill in trench above drain grade for 45 x 66-inch rectangular drain. Trench, 10 feet deep.....	\$1.00	\$2,755.00	40 cu. yds.	Ordinary concrete masonry, not included in section shown on plans, mixed 1:2½:5....	\$8.00	\$320.00
700 lin. ft.	Earth excavation and refill in trench above drain grade for 48-inch circular drain. Trench, 11 feet deep.....	1.90	1,330.00	5 cu. yds.	Rubble stone masonry, laid in cement mortar.....	6.50	32.50
2,370 lin. ft.	Earth excavation and refill in trench above drain grade for 42-inch circular drain. Trench, 12 feet deep.....	1.56	3,697.20	300 lin. ft.	Excavating for, furnishing and laying 4-inch underdrains, including gravel or other refilling around same.....	0.15	45.00
5,475 lin. ft.	Earth excavation and refill in trench above drain grade for 36-inch circular drain. Trench, 10.7 feet deep.....	0.95	5,201.25	200 lin. ft.	Excavating for, furnishing and laying 6-inch underdrains, including gravel or other refilling around same.....	0.20	40.00
4,210 lin. ft.	Earth excavation and refill in trench above drain grade for 30-inch circular drain. Trench, 10.8 feet deep.....	0.95	3,999.50	400 lin. ft.	Excavating for, furnishing and laying 8-inch underdrains, including gravel or other refilling around same.....	0.30	120.00
1,000 lin. ft.	For furnishing material and building 45 x 66-inch reinforced concrete drain.....	10.53	10,530.00	400 lin. ft.	Excavating for, furnishing and laying 10-inch underdrains, including gravel or other refilling around same.....	0.35	140.00
450 lin. ft.	For furnishing material and building 45 x 66-inch reinforced concrete drain on piles....	11.25	5,062.50	3,100 lin. ft.	Spruce or pine piles, driven and cut off....	0.40	1,240.00
700 lin. ft.	For furnishing material and building 48-inch circular drain of brick masonry....	4.69	3,283.00	222 lin. ft.	Brick manholes, complete, including labor, material excavation and back-filling for the same, depth to top of drain, 6.25 feet..	45.00	9,990.00
700 lin. ft.	For furnishing material and building 48-inch drain of ordinary concrete masonry....	5.82	4,074.00	8 lin. ft.	Drop manholes, complete, including labor material, excavation and brickfilling for same.....	54.00	432.00
700 lin. ft.	For furnishing and building 48-inch circular drain of reinforced concrete masonry.....	6.75	4,725.00	3,500 cu. yds.	Filling in embankment measured in place....	0.40	1,400.00
700 lin. ft.	For furnishing material and building 48-inch circular drain of reinforced concrete pipe.....	3.60	2,520.00	25 cu. yds.	12-inch bevel connections built in.....	0.75	18.75
2,430 lin. ft.	For furnishing material and building 42-inch circular drain of brick masonry....	4.20	10,206.00	1 cu. yd.	15-inch bevel connections, built in.....	0.90	0.90
2,430 lin. ft.	For furnishing material and building 42-inch circular drain of ordinary concrete masonry.....	4.37	10,619.10	1 cu. yd.	18-inch bevel connections, built in.....	1.00	1.00
2,430 lin. ft.	For furnishing material and building 42-inch circular drain of reinforced concrete pipe..	3.22	7,824.60	1 cu. yd.	24-inch bevel connections, built in.....	1.50	1.50
6,342 lin. ft.	For furnishing material and building 36-inch circular drain of brick masonry.....	3.66	23,211.72	375 sq. yds.	Repaving in gutters or streets, exclusive of that required for restoring pavement over drains, ditches and inlets.....	1.50	562.50
6,342 lin. ft.	For furnishing material and building 36-inch circular drain of ordinary concrete masonry.....	2.91	18,455.22	200 sq. yds.	Riprap and slope paving.....	0.90	180.00
6,342 lin. ft.	For furnishing material and building 36-inch circular drain of reinforced concrete pipe..	2.87	18,201.54	6,122 lin. ft.	Earth excavation and refill in 12-inch inlet connections and furnishing and laying pipe in same.....	0.85	5,203.70
4,547 lin. ft.	For furnishing material and building 30-inch circular drain of vitrified pipe.....	3.05	13,868.35	232 lin. ft.	Inlets with granite or blue stone head, including excavating and backfilling for the same.....	28.00	6,496.00
4,547 lin. ft.	For furnishing material and building 30-inch circular drain of ordinary concrete masonry.....	2.50	11,367.50	25 cu. yds.	Earth excavation of extra depth below drain made by order of the Engineer, not including excavation for underdrains.....	1.00	25.00
4,547 lin. ft.	For furnishing material and building 30-inch circular drain of reinforced concrete pipe..	2.44	11,094.68	215 lin. ft.	For furnishing and laying 15-inch vitrified pipe in portion of trench where rock is encountered.....	0.76	163.40
8,680 lin. ft.	Earth excavation and refill in trench above drain grade for 24-inch vitrified pipe drain, including furnishing and laying pipe in same; trench, 8.8 feet deep.....	2.24	19,443.20	200 lin. ft.	For furnishing and laying 12-inch vitrified pipe in portion of trench where rock is encountered.....	0.55	110.00
8,125 lin. ft.	Earth excavation and refill in trench above drain grade for 18-inch vitrified pipe drain, including furnishing and laying pipe in same; trench, 7.5 feet deep.....	1.41	11,456.25	20 lin. ft.	For furnishing and laying 24-inch vitrified pipe on embankments without excavation.	1.70	34.00
8,285 lin. ft.	Earth excavation and refill in trench above drain grade for 15-inch vitrified pipe drain, including furnishing and laying pipe in same; trench, 6.7 feet deep.....	1.26	10,430.10	10 lin. ft.	For furnishing and laying 18-inch vitrified pipe on embankments without excavation.	0.93	9.30
1,345 lin. ft.	Earth excavation and refill in trench above drain grade for 12-inch vitrified pipe drain, including furnishing and laying pipe in same.....	0.99	1,331.55	10 lin. ft.	For furnishing and laying 15-inch vitrified pipe on embankments without excavation.	0.76	7.60
1,700 cu. yds.	For excavating rock or boulders of ½ cubic yards or more in volume.....	3.00	5,100.00	10 lin. ft.	For furnishing and laying 12-inch vitrified pipe on embankments without excavation.	0.51	5.10
285 cu. yds.	Ordinary brick masonry, not included in sections shown on plans, laid in Portland cement mortar.....	9.00	2,565.00	25 cu. yds.	Gravel or backfilling below grades, not including underdrain, made by order of the Engineer.....	2.50	62.50
175 cu. yds.	Vitrified brick masonry, laid in Portland cement mortar.....	11.00	1,925.00	15 M.ft.B.M.	Lumber used for sheeting and shoring, but left in place by order of the Engineer....	30.00	450.00
				10 M.ft.B.M.	Lumber in trench used for permanent foundation, exclusive of piling, including all incidental work.....	40.00	400.00
				175 cu. yds.	Earth excavation and backfilling in trench, where rock is encountered.....	0.50	87.50
				400 lin. ft.	For furnishing and laying 24-inch vitrified pipe in portion of trench where rock is encountered.....	1.70	680.00
				180 lin. ft.	For furnishing and laying 18-inch vitrified pipe in portion of trench where rock is encountered.....	0.93	167.40
					Sum total of minimum bids.....		\$152,002.02

CONVENTION NOTES

Annual Meeting of the American Civic Association.—This convention will meet at Milwaukee, October 24, 25 and 26. The headquarters of the association will be at the Hotel Pfister. The program is as follows:

October 24.—

10:30 a. m. Address of Welcome by the Mayor. Response by the President, J. Horace McFarland. Paper on "The National Impulse for Civic Improvement," by Clinton Rogers Woodruff, of Philadelphia. Treasurer's annual report; nomination and election of officers. 2:30 p. m. Reports from the Departments of Arts and Crafts, Children's Gardens, City Making, Factory Betterment, Outdoor Art, Social Settlements, Public Recreation, Press, Public Nuisances, Parks and Public Reservations, Railroad Improvement, and Rural Improvement. 8 p. m. Papers on Wisconsin's Contributions to Civic Progress; three papers.

October 25.—

10:30 a. m. Papers on "San Francisco's Opportunity and How She Is Using It," "Civic Beauty and Civic Safety," and a discussion on "Architecture and Civic Progress." 2:30 p. m. Papers on "What Women Are Doing for Civic Improvement," "Cleaning-Up Days," "The Kalamazoo Story," "The Richmond Story," "Texas Cities and Improvement Work," 8 p. m. Papers on "Our National Capital," "The Niagara Campaign," and "The Billboard Nuisance."

October 26.—

10:30 a. m. Papers on "What One Association Did," "The Appalachian Reservation," and "Mosquito Extermination." Also a discussion of "Improvement Topics." In the afternoon, personally-conducted visits will be made to points of interest. The association will be the guest of the Mayor of Milwaukee, the Citizens' Business League, the Park Commissioners, and the Milwaukee branch of the association.

Thirty-fourth Annual Convention of the International Association of Fire Engineers.—The convention was held at Dallas, Tex., October 9, with about two hundred present. The morning of that day was devoted to addresses of welcome. At 2 p. m. a business session was held, after which a trolley ride was taken by the ladies to Lake Cliff. At 8 p. m. memorial services were held at Bush Temple in honor of the departed members of the association. During the afternoon and evening of the 10th the following topics were discussed: "Are Chemical Engines Preferable to Combination Wagons?" "What Size Tanks Are Best Suited for Chemical Engines and Combination Wagons?" "What Is the Estimated Life of a Chemical Tank? What Are the Best Means of Preventing the Acid from Destroying the Tanks? How Much Soda and Acid Should Be Used?" "A Radical Stand for Better Building Laws"; "Rubber Tires on Fire Apparatus"; "Dangerous Vertical Openings"; "Assisting Police and Militia in Suppressing Riots"; "The Best Way to Test Steamers"; "Establishment, Equipment and Maintenance of Fire Departments in Cities of 5,000 to 10,000 Inhabitants"; "Lessons from San Francisco." On the morning of the 10th exhibit tests were given of fire apparatus and appliances, including steamers, hose wagons, nozzles, ladders and aerial trucks. In the afternoon the visitors were treated to a barbecue at Lake Cliff. The morning of the 11th was devoted to a business session. Washington, D. C., was selected as the next place of meeting, and the following officers were chosen: President, George Kellogg, Sioux City, Iowa; First Vice-President, M. E. Higgins, Albany, N. Y.; Second Vice-President, Fillmore Tyson, Louisville, Ky.; Treasurer, D. C. Larkin, Dayton, Ohio (re-elected); Secretary, James McFall, Roanoke, Va. (re-elected).

In connection with the convention an exhibition of fire-fighting apparatus and appliances was given by the manufacturers in a hall convenient to the assembly room.

Mayors' Association of Illinois.—This association met at Chicago, September 26 to 28. About sixty cities of the State are members; but it is hoped to bring in the whole 800 this year. Most of the time of the delegates present was occupied at the meetings of the League of American Municipalities.

Calendar of Meetings of Municipal and Allied Societies

October 31.

Empire State Gas and Electric Association.—Organization meeting, New York City.—T. R. Beal, Secretary, Poughkeepsie, N. Y.

October 24-26.

American Civic Association.—Annual convention, Milwaukee, Wis.—Clinton Rogers Woodruff, Secretary, 703 North American Building, Philadelphia, Pa.

October 29.

New Jersey State Firemen's Mutual Benevolent Association.—Convention, Atlantic City, N. J.—R. D. Bender, Secretary, 212 Halsey street, Newark, N. J.

November 13-15.

Southern Immigration and Quarantine Conference, Nashville, Tenn.

November 13.

New York State Conference of Charities and Corrections.—Seventh conference, Rochester, N. Y.—Walter E. Kruesl, Secretary, 105 East Twenty-second street, New York City.

November 14-16.

International Congress on Tuberculosis.—New York City. (The principal purpose of the congress will be that of urging preventive legislation against tuberculosis, the adoption of municipal and government sanitariums and discussion of all the questions involved.)

November 15.

National Society for the Protection of Public Health and Morals.—To be organized at Hudson Theater, New York City.

November 15-16.

Deep Waterway Convention, St. Louis, Mo.—Hon. Henry T. Rainey, Secretary, Carrollton, Ill.

November 15-17.

Mississippi State Firemen.—Convention to organize an Association, Hattiesburg.—Chief A. F. Potter, Secretary, Hattiesburg, Miss.

December 3-4.

American Society of Refrigerating Engineers.—Annual meeting, New York City.—W. Everett Parsons, Secretary, 12 West 31st street, New York City.

December 4-7.

American Society of Mechanical Engineers.—Annual meeting, New York City.—F. R. Hutton, 12 West 31st street, New York City.

December 5-7.

National Association of Manufacturers of Sand-lime Products.—Third annual convention, Chicago, Ill.

December 5-7.

National Drainage Conference.—Oklahoma City, Okla.—A. W. Knead, Secretary, Oklahoma City, Okla.

December 27-January 2, '07.

American Association for the Advancement of Science.—Annual meeting, New York City.—L. O. Howard, Secretary, Cosmos Club, Washington, D. C.

January, '07.

American Institute of Social Service.—Exposition, New York City.—Dr. William H. Tolman, Director, 287 Fourth avenue, New York.

February 15-16.

Wisconsin Gas Association.—Annual meeting.—Henry H. Hyde, Secretary, Racine, Wis.

February 22, '07.

New England Association of Gas Engineers.—Annual meeting, Boston, Mass.—N. W. Gifford, Secretary, New Bedford, Mass.

April 18-21, '07.

Southwestern Gas, Electric and Street Railway Association.—Annual meeting, San Antonio, Tex.—Frank C. Duffey, Secretary, Beaumont, Tex.

WHO'S WHO IN MUNICIPAL WORK

SYLVESTER, Ira Wallace.—City Engineer, Alexandria, La. Born at Portland, Me., in 1868. Has designed and constructed waterworks plans for Opelousas, Alexandria, Washington, Leconte, Boyce, Mansfield, Marksville, Carencro, and Eunice, La. Also electric light, sewerage, paving and other municipal work in several parishes. Residence, Alexandria, La.

WEED, Howard Evarts.—Landscape architect. Is engaged in the beautification of various cities throughout the Middle West. A graduate of the Michigan Agricultural College, and post-graduate of Cornell University. Has spent six years as a teacher of horticulture and entomology at the Mississippi Agricultural College. Is an authority on practical horticulture and entomology, and the author of "Spraying for Profit," the twelfth revised edition of which is now in press. He makes a specialty of park and cemetery work, and during the past year has made improvements to the parks of Battle Creek, Mich.

LEGAL NEWS

A Summary and Notes of Recent Decisions—Rulings of Municipal Interest

City Wins Park

Pueblo vs. Kreutzinger.—The case involved a block of land in Mineral Palace park, which belonged to an estate in process of administration. Kreutzinger held a mortgage on the land; he claimed that, his mortgage being of record, he should have been a party to the petition to sell, or of any order of court. The City Attorney took the ground that the mortgage was not a notice to a purchaser at a judicial sale, but from the fact that the property was a part of an estate in process of administration, Kreutzinger had notice as to the kind of title he was getting, and could only mortgage his contingent interest. The plea of the City Attorney was sustained.—U. S. District Court, Pueblo, Col.

Contracting Company Loses

National Contracting Co. vs. Hudson River Water Power Company.—It was alleged that certain changes of plans for a dam, which the Hudson River Water Power Company was having built at Spier Falls, N. Y., constituted a breach of contract. The power company maintained that it had a right to make the change. Damages of \$383,352 were awarded the Hudson River Water Power Company.—Alton B. Parker, Referee.

Hillside Drainage

Borough of Crafton vs. County of Allegheny et al.—The owners of property on a hillside collected the drainage water at different points and allowed it to flow into ancient water courses. There was no increase in the quantity of water and no change in the places to which it would have eventually gone. Held that a borough located on the lower ground could not object to this collection of the water and construction of drains.—Common Pleas, Allegheny Co., Pa.

TRADE NOTES

ELECTRICAL EQUIPMENT.—The town of Cardston, Alta., Canada, has purchased from Allis-Chalmers-Bullock, Ltd., an electric and waterworks plant, including a special compound duplex pump.

LEADITE.—The Leadite Company, 1215 Filbert street, Philadelphia, Pa., manufactures a material as a substitute for lead in making the joints of water, gas and other pipes. The material weighs only 118 pounds per cubic foot, one-sixth as much as lead, and is shipped in powdered form in 300 and 350-pound barrels and 100-pound bags. It is melted (at 400° Fahr.), and poured like lead, but needs no caulking. Defective joints can be patched without cutting out. A gasoline furnace is recommended for melting. Mr. George McKay, General Manager, states that two 5-foot lengths of 6-inch iron pipe which had been jointed by leadite and dropped eight feet on a log stood dry under 130 pounds water pressure; and that a 4-mile line is now tight after having been laid twelve years.

SEWER TRAP.—S. Cameron Corson, Norristown, Pa., has placed on the market a sewer trap for inlets and catch basins which has been in use for some time in his city. The small depth of inlet required in which to set the trap makes it possible to connect with an old lateral. A hand-hole lid in line with the lateral extended may be used for removing obstructions, although the trap is intended to be self-cleaning. The trap is claimed to be a positive preventive of the escape of sewer gases and it is not unreasonably expensive.

STANDARD THREADS.—The Association of Licensed Automobile Manufacturers, in bulletin No. 18, describes new screw standards which have been adopted. The old United States standards, adopted by the United States navy in 1868, have been found too coarse and the dimensions of heads and nuts too large for manufacturers of fine machinery.

TUBE MILLS.—The Power and Mining Machinery Company, Cudahy, Wis., has recently received from the United States Steel Corporation the largest order for tube mills ever placed. The order is for 47 tube mills, 5 feet in diameter by 22 feet in length; twenty of these will be placed in the plant of the Carnegie Steel Company, Homestead, Pa., and 27 will go in the new cement plant of the Illinois Steel Company, at Buffington, Ind.

WATER AND GAS PIPES.—The McWane Pipe Works, Lynchburg, Va., nearly four years ago began the manufacture of cast-iron pipe in a small pit of 12 to 15 tons capacity. Since then the output of the Lynchburg plant has been increased 400 per cent., and the company has recently purchased the Radford Pipe Works, Radford, Va.



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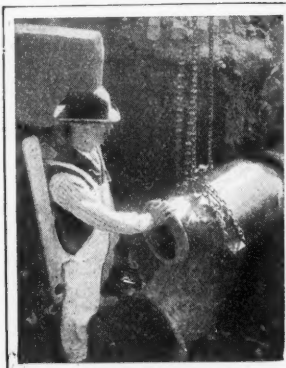


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Southern Exchange Co. 97 Warren St., N. Y.

PATENT CLAIMS

831,988.—Chemical Fire-Extinguisher. John G. Platt and William B. Landon, Meadville, Pa., assignors of one-third to Morris B. Brewster, Columbus, Ohio. Serial No. 280,407.

In a fire-extinguisher, the combination with a reservoir and an acid-bottle, of a cover for the reservoir carrying a valve-chamber, said cover being arranged to establish communication between the acid-bottle and the valve-chamber, and a valve arranged in the chamber.

832,017.—Culvert. Frank Hummel, Newton, Iowa. Serial No. 240,034.

An improved metal culvert, comprising a number of metal arches, each formed of two parts, one of said parts having at its upper edge a groove open at its top and the other part having a downwardly-projecting shoulder to enter said groove, each of said parts formed with a horizontal flange at its bottom and each of said arches formed with a grooved portion at one end open at its top and including the base-flanges and also formed at its other end with a downwardly-projecting flange to enter the groove of a mating arch.

832,101.—Machine for Making Artificial Stone Blocks and the Like. Richard Titus and Frank J. Mearning, Bowling, Green, Ohio. Serial No. 283,294.

In a machine of the class described, a mold having movable walls, a movable bottom plate arranged within the mold, lifting mechanism for elevating the bottom plate to permit the withdrawal of the latter from one end of the machine, and means for moving the walls to open position and simultaneously actuating the lifting mechanism.

832,132.—Machine for the Production of Drain-Tiles. Nikolaus Ketelsen, Klappholz per Havetoft, Germany. Serial No. 310,391.

An improved machine for the production of hollow drain-tiles comprising in combination a lower mold member semicircularly dished in cross-section, a circular stationary apertured plate located at each end of said mold, a cylindrical core located concentrically with respect to said mold member, means for reciprocating the core axially with respect to the lower mold member whereby said core is adapted to pass through the apertures of said end plates, a hand-actuated ledge for forming the upper half of the drain-tiles around the top portion of the aforesaid core, means for rectilinearly guiding the ledge during its movement, and means for raising the finished drain-tiles above the mold, substantially as set forth.

832,538.—Dumping-Wagon. Edward Dalton and Homer A. Tiffany, Syracuse, N. Y. Serial No. 276,789.

In a dumping-wagon, the combination with a frame comprising longitudinal bottom bars, of a box composed of two independent sections having their bottoms normally resting upon said bars and pivotally connected to the under sides thereof, said sections being adapted to be tilted endwise toward each other and to pass one within the other, whereby the inner ends of the bottoms are carried below the said bars, separate mechanisms for independently tilting the sections, and a chute consisting of a box having its sides rigidly fastened to the under side of the frame and a movable bottom serving to normally support part of the load and operative for discharging at either side of the wagon as set forth.

Civil Service Examinations

Chief, Water Bureau.—Philadelphia, Pa.—A competitive examination for the position of Chief of the Bureau of Water, of the city of Philadelphia, will be held at Room 875 City Hall, Philadelphia, on Oct. 31, at 10 a. m. Applicants must be citizens of the United States, 30 years of age or over. Must be competent civil engineers, with executive capacity, and preferably with experience in the conduct of water-works. Must have technical knowledge equivalent to that required for graduation from a technical school of good standing. Need not be residents of the city of Philadelphia. Further particulars will be furnished upon written request to the Civil Service Commission, Philadelphia.

Topographic and Cartographic Draftsman.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on Oct. 30-31, to secure eligibles to fill three vacancies in the position of Topographic and Cartographic Draftsman, at \$1,000 a year each, in the Office of Chief of Staff, War Department, and vacancies as they may occur in any branch of the service requiring similar qualifications. Age limit, 20 years or over on the date of examination. Competitors who attain a rating of less than 70 on the subject of drawing and lettering will not be eligible for appointment.

Proposals

Pumping Engine

Brockton, Mass.
Sealed proposals, endorsed "Proposals for Pumping Plant," will be received at the office of the Water Commissioners, City Hall, Brockton, Mass., until 12 o'clock noon on Wednesday, November 21, 1906, for furnishing and erecting complete, on foundations furnished by the city, one vertical triple-expansion condensing, crank-and-flywheel pumping engine of six million gallons' daily capacity.

Each proposal must be accompanied by a certified check drawn and made payable to the City of Brockton, for the amount of one thousand (\$1,000.00) dollars.

Blank proposals and specifications and further information will be furnished on application to the Water Commissioners.

The right to reject any and all bids is expressly reserved.

THOMAS G. NYE,
FRANCIS B. GARDNER,
HORACE KINGMAN,
Water Commissioners.

CHARLES R. FELTON, City Engineer.

Pumping Engine

NOTICE TO CONTRACTORS.

Decatur, Ill.
Sealed bids will be received by the undersigned until 8 o'clock P.M., October 29th, 1906, for furnishing a Compound Condensing Vertical or Horizontal Pumping Engine, of a capacity of six million gallons per day of twenty-four hours, for the Waterworks system of the City of Decatur, Illinois.

Form of Contract and Specifications can be seen or obtained at the office of the undersigned, or at the office of Daniel W. Mead, Consulting Engineer, First National Bank Building, Chicago, Illinois.

A certified check on some responsible bank in the City of Decatur, Illinois, for twenty-five hundred (\$2,500.00) dollars, payable to F. L. Robbins, Comptroller of the City of Decatur, must accompany each bid. The right is reserved to reject any or all bids.

ALBERT LEACH,
City Clerk.

Preliminary Filters

Department of Public Works.

Bureau of Filtration,
Office, 710 City Hall,
Philadelphia, Oct. 9, 1906.

Sealed proposals, endorsed "Bids for Preliminary Filters," and addressed to the undersigned, at the office above mentioned, will be received until 12 o'clock noon of Wednesday, November 7th, 1906, for Contract No. 89—Preliminary Filters at Belmont Station.

Specifications, drawings and blank forms upon which bids must be made can be obtained at Room 712 City Hall, Philadelphia. No bid will be considered unless accompanied by a certificate from the City Solicitor that the provisions of an ordinance requiring proposal bonds when the bids exceed in amount five hundred dollars, approved May 25, 1860 (p. 81, West), have been complied with.

The Director reserves to himself the right to reject any or all bids as he may deem best for the interests of the city.

THOMAS L. HICKS, Director.

Conduit and Embankment

COMMONWEALTH OF MASSACHUSETTS,
Charles River Basin Commission.

Sealed proposals will be received at the office of the Charles River Basin Commission, Boston, Mass., until 2:30 o'clock p. m. of Monday, October 29, 1906, for building Section 4 of the Boston Marginal Conduit and Section 2 of the Boston Embankment, requiring about 145,000 cubic yards of earth fill, 170,000 lineal feet of piles, 5,700 cubic yards of concrete masonry and 900 cubic yards of stone masonry. The Embankment will be made along the Boston side of the Charles River, between Berkeley and Gloucester Streets, a distance of about 2,400 feet, and will be about 100 feet wide. Pamphlets containing further information for bidders, forms of proposal, contract and specifications will be ready about October 11th, and will be mailed to contractors who apply to the Chief Engineer, or may be obtained at his office, No. 367 Boylston Street, Boston, where also plans may be seen.

The Commission reserves the right to reject any or all proposals and to accept the proposal deemed best for the Commonwealth.

HENRY S. PRITCHETT, Chairman;
HENRY D. YERXA,
JOSHUA B. HOLDEN,

Charles River Basin Commission.
HIRAM A. MILLER, Chief Engineer;
WILLIAM S. YOUNGMAN, Secretary.

Bonds For Sale

State of South Carolina.

County of Laurens.

Notice is hereby given that the County Board of Commissioners for Laurens County will, on Saturday, the third day of November, 1906, at 4 o'clock P.M., at Greenwood Court House, in the County of Greenwood, State of South Carolina, sell to the highest bidder, for cash, the following bonds, to be issued by said County Board of Commissioners, to wit:

The bonds over the territory of Sullivan Township, in Laurens County, South Carolina, for a sum not exceeding Twenty-two Thousand Dollars (\$22,000.00).

The said bonds will be thirty-year coupon bonds, bearing interest at the rate of five per cent. per annum, payable semi-annually.

The bonds have been passed upon by the Supreme Court of South Carolina.

All persons bidding on said bonds will be required to deposit a certified check in a sum not less than One Thousand Dollars (\$1,000), payable to the Board of County Commissioners for Laurens County. The said check to be forfeited in case the purchasers do not comply with their bid, and in case the said purchasers do comply with their bid the said amount to go as a credit on said purchase.

All persons desiring further information as to said bonds can obtain the same by corresponding with C. C. Featherstone, Esq., Laurens, S. C.

H. B. HUMBERT,

W. F. BAILEY,

J. E. ROBERTS,

County Commissioners, Laurens
County, South Carolina.

Bonds for \$26,200

State of South Carolina.

Greenville County.

Notice.

Notice is hereby given that the County Board of Commissioners for Greenville County will on Monday, the 19th day of November, 1906, at twelve o'clock, at Greenville Court House, County of Greenville, and State of South Carolina, sell to the highest bidder for cash the following bonds, to be issued by said Board of County Commissioners, to-wit:

The bonds of the township of Dunklin, in the County of Greenville, for a sum not exceeding Fifteen Thousand Seven Hundred Dollars.

The bonds of Oaklawn township, in the County of Greenville, not exceeding the sum of Ten Thousand Five Hundred Dollars.

The said bonds will be twenty-year coupon bonds, bearing interest at the rate of four and one-half and not exceeding five per cent. per annum, payable semi-annually. Five Hundred Dollars on behalf of each township to be retired annually.

The validity of the said bonds have been passed upon and declared both by the Supreme Court of this State, and the United States Supreme Court.

All persons bidding on said bonds will be required to deposit a certified check in the sum of One Thousand Dollars, payable to the Board of County Commissioners for Greenville County. All bids to be sealed and must be in the hands of the County Board of Commissioners on or by twelve o'clock of the day of sale.

Sewers

Bainbridge, Ga.

Sealed bids will be received until 2 p. m., Thursday, Nov. 8th, for furnishing all materials and constructing 8 or 9 miles of pipe sewers with the necessary Manholes, Flush Tanks, etc., at Bainbridge, Ga.

This soil is unusually favorable for trenching. Plans and profiles may be seen at the office of Arthur Pew, Consulting Engineer, Atlanta, Ga., and at the office of the City Clerk at Bainbridge.

E. A. WIMBERLY, City Clerk,
Bainbridge, Ga.

Sewers

Greenville, Ala.

Sealed bids will be received until 2 p. m., Monday, Nov. 5th, for furnishing all materials and constructing 3 to 4 miles of Pipe Sewers, with the necessary Manholes and Flush Tanks, at Greenville, Ala.

Plans may be seen at the office of Arthur Pew, Consulting Engr., Atlanta, Ga., and at the office of the City Clerk at Greenville.

THOS. W. PEAGLER, City Clerk,
Greenville, Ala.

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